

# Army Lodging Wellness Recommendation

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Fort Knox

August 13, 2003

**3D/I**

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# Section 1 Wellness Recommendation

The Army Lodging Wellness Program is conducted under the direction and guidance of Headquarters Army, Lodging Division (CFSC). The goal of the Fort Knox Lodging Wellness Plan is to provide a comprehensive assessment and planning tool to support long term capitalization of Army Lodging facilities. The Demand Analysis determines installation Lodging requirements, and reviews off-post Lodging availability and cost, arriving at the most economical solution for meeting total transient requirements and providing a final determination of the appropriate number and configuration of on-post Lodging rooms. Individual Lodging facility condition (building and building systems) and functional assessments are included with both recommendations and costs. Facility improvement and renovation versus replacement/new construction recommendations are developed based on the individual facility assessments and cost. A Lodging Master Plan for the installation is developed including renovation, replacement/new construction, and proposed new facility siting. A final recommendation defines the method for achieving the final wellness solution for the installation and will assist with project planning.

## Methodology

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### ***Demand***

- Demand for Lodging facilities is analyzed and adjusted for atypical past occurrences and for expected changes in the installation's population, housing, or mission. Two primary methods are used to calculate the optimum number of rooms: the number necessary to meet 80% of official demand and the number projected to be the most efficient from an operating cost perspective.
- The off-post private market is assessed for capacity and representative rates. A determination is made if the private market has the capability to handle overflow requirements of official demand.
- Room mix recommendation is based on the segmentation of the Permanent Change of Station (PCS)/Temporary Duty (TDY) mix and the expected lengths of stay. This produces the final determination of the appropriate number and configuration of rooms for the installation.

### ***Assessment***

- Existing Lodging facilities are assessed based on building and building system conditions followed by an assessment for conformance to the Army Lodging functional standards. Facilities

assessed to be in fair to good condition, and meeting the majority of functional requirements, are considered for renovation. Renovation of Lodging facilities found in poor condition and configured significantly different than current standards will typically exceed 50% of the replacement costs and are recommended for replacement/new construction. This decision is supported by renovation cost comparisons as well as the assessment documentation.

- The age, condition, and configuration of the majority of existing Lodging buildings support a finding of replacement through new construction.
- Force protection construction criteria have a significant impact on new construction. This Wellness recommendation, including building assessment, site analysis, and proposed construction, incorporates requirements from the UFC 4-010-01. Consistent with this guidance, force protection mitigation is not considered in renovation unless the renovation cost exceeds 50% of the replacement cost for a facility.

## **Demand Summary**

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Based on the historic and expected demand pattern at this facility, it is our recommendation that the number of rooms be sized using the “Most Economically Efficient” criterion. Using this criterion, we expect an occupancy rate of 88% which meets 89% of the projected official demand.

### ***Room Count and Mix Recommendation***

- 581 rooms
- Proposed room mix:
  - 98 standard guest rooms
  - 447 extended-stay guest rooms offering a kitchenette
  - 36 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette

The demand analysis has determined a need of 581 rooms; however, based on existing and proposed building configurations, the actual number recommended for the Fort Knox Wellness Plan will be 597 rooms.

## Lodging Summary

The following Lodging for Fort Knox is summarized by building, including number of existing rooms and number of proposed rooms determined as part of the installation Wellness recommendation. The table also indicates the number of rooms required for a new Lodging facility based on buildings not proposed for re-use due to poor existing conditions and high renovation costs. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration.

Building Number	Existing Rooms					Wellness Recommendation (FY 08)			
	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf	Other Rooms	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf
<b>Wellness Recommendation based on Demand Analysis</b>									
						581	98	447	36
<b>Existing Lodging Facilities</b>									
856	15			15		0			
857	14			14		0			
1004	1				1	0			
1117	10			10		0			
1120	1				1	0			
2441	12			12		0			
2443	12			12		0			
2444	12			12		0			
2445	12			12		0			
2446	12			12		0			
2447	12			12		0			
2448	12			12		0			
2449	12			12		0			
2602	26		26			0			
2603	44		44			0			
2604	8		8			0			
2605	24		24			0			
2606	26		26			0			
2607	45		45			0			
2608						0			
4016	1				1	0			
4770	196		180	16		0			
7961	105	55		50		105	55		50
<b>Totals</b>	<b>612</b>	<b>55</b>	<b>353</b>	<b>201</b>	<b>3</b>	<b>105</b>	<b>55</b>	<b>0</b>	<b>50</b>
<b>New Proposed Lodging Facility</b>									
						492	43	449	
<b>Total Lodging Rooms</b>									
						597	98	449	50

### Summary of Room Count and Mix based on Configuration

- 597 rooms
  - 98 standard guest rooms;
  - 449 extended-stay guest rooms offering a kitchenette;
  - 50 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette.

## Cost Summary

### Project Cost

The following table summarizes the Condition Analysis, Renovation, and Replacement Cost by individual Lodging facilities. The Wellness Recommendation indicates cost by building based on recommendation, including the proposed facility cost.

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Building Number	Existing Units					Wellness Recommendation (FY 08)			
	Total Rooms	Condition Analysis Cost*	Renovation Cost**	Replacement Cost	% Condition Analysis or Renovation Cost Ratio	Total Rooms	Total Cost	Renovation Cost	New Construction Cost
<b>Existing Lodging Facilities</b>									
856	15	\$1,348,215	****	\$2,635,525	51.16%	0			
857	14	\$1,215,140	****	\$2,189,560	55.50%	0			
1004	1	\$256,420	****	\$483,895	52.99%	0			
1117	10	\$1,300,640	****	\$1,250,480	104.01%	0			
1120	1	\$272,600	****	\$521,640	52.26%	0			
2441	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2443	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2444	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2445	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2446	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2447	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2448	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2449	12	\$1,073,510	****	\$2,025,480	53.00%	0			
2602	26	\$1,721,100	****	\$2,556,290	67.33%	0			
2603	44	\$2,887,400	****	\$3,999,595	72.19%	0			
2604	8	\$594,030	****	\$775,815	76.57%	0			
2605	24	\$1,626,635	****	\$2,395,515	67.90%	0			
2606	26	\$1,669,850	****	\$2,556,290	65.32%	0			
2607	45	\$3,689,750	****	\$4,078,115	90.48%	0			
2608	0	\$310,305	****	\$553,900	56.02%	0			
4016	1	\$280,535	****	\$543,655	51.60%	0			
4770	196	\$13,774,545	****	\$22,773,285	60.49%	0			
7961	105	\$3,988,820	* * * * *	\$12,754,780	31.27%	105		\$ 3,988,820	
<b>Totals</b>	<b>612</b>					<b>105</b>	<b>\$ 3,988,820</b>	<b>\$ 3,988,820</b>	<b>\$ -</b>
<b>New Proposed Lodging Facility</b>									
						<b>492</b>	<b>\$ 49,571,090</b>		<b>\$ 49,571,090</b>
<b>Total</b>						<b>597</b>	<b>\$ 53,559,910</b>	<b>\$ 3,988,820</b>	<b>\$ 49,571,090</b>

\* The Condition Analysis Cost is for making the building well based on Army Lodging Standards without changing how the building functions.

\*\* The Renovation Cost is for making the building well based on Army Lodging Standards including making functional changes.

\*\*\*\* If the Condition Analysis Cost is over 50% of the Replacement Cost, a Renovation Cost is not included.

\* \* \* \* \* The Renovation Costs have been included in the Condition Assessment cost and are under 50%. No Renovation Cost is used for this building.

### Cost per Room Comparison

The Wellness Recommendation includes review of off-post Lodging costs compared to the proposed renovation and new construction costs on-post. The renovation and new construction costs include operating costs, capital assessment costs, and sustainment capital expenditures. The following table summarizes this comparison per room for FY08.

	Renovation	New Building	Total
Cost per Room at Fort Knox	\$ 53.04	\$ 59.48	\$ 58.34
Off Post Cost per Room	\$ 60.46	\$ 60.46	\$ 60.46
Difference between On-Post and Off-Post Lodging per room	\$ 7.43	\$ 0.99	\$ 2.12
% Savings of On-Post to Off-Post Lodging	12.3%	1.6%	3.5%

The Cost Per Room at Fort Knox is based on:

Renovation / New Construction Cost w/ inflation to FY 08

Current Operating Cost w/ inflation to FY 08

Cap Ex Cost

Capital Assessment Cost to FY 08

Off Post Cost is based on current room rate average with inflation to FY 08

Due to this cost difference and the savings of 3.5%, it is our recommendation that the Army construct a new Lodging facility and retain one existing facility at Fort Knox in lieu of using off-post lodging to support the determined demand requirement. Off-post lodging will continue to be used for demand beyond the on-post room requirement.

## Recommendations / Conclusions

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The Wellness Recommendation for Fort Knox is to continue the use of building 7961 with 105 rooms and to construct a new main Lodging facility to accommodate the public and back-of-the house spaces and 492 rooms for a total of 597 rooms, to meet the 581 room requirement. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration. Building 7961 has an overabundance of family suites based on the demand requirement. We recommend maintaining these rooms in lieu of reconfiguring to meet demand requirements. Existing Lodging facilities that do not meet condition and functional requirements based on cost shall be removed from the Lodging inventory. A synopsis of recommended building actions follows:

- Retain building 7961 with 105 rooms. Based on the location and current configuration of the building, however, we do not recommend significant renovations to the public spaces and/or back-of-the-house spaces to meet current functional criteria. These spaces are included in the new Lodging facility design.
- Remove all other existing Lodging buildings from the Lodging inventory due to condition of existing building systems and/or cost to renovate to meet Army functional criteria.

- Construct a new Lodging facility to include 492 guest rooms. This building will be planned to include public and back-of-the-house Lodging functions for the total Lodging inventory.

### ***Cost Summary***

The cost for this recommendation will be:

Renovation of building 7961	\$ 3,988,820
New Lodging Facility	\$49,571,090
<b>Total</b>	<b>\$53,559,910</b>

### ***Phasing***

Recommend the following phasing as funding is identified.

- Minimize investment in infrastructure for buildings 856, 857, 1004, 1117, 1120, 4016, 2400 series, 2600 series, and 4770.
- Construct new Lodging facility prior to removing existing Lodging facilities from inventory and removing back-of-the-house and public spaces from building 7961.
- Renovate building 7961 to incorporate all condition assessment deficiencies and remove back-of-the-house and public spaces.
- Remove buildings 856, 857, 1004, 1117, 1120, 4016, 2400 series, 2600 series, and 4770 from Lodging inventory.



### **Section 2**

### **Lodging**

### **Master Plan**

Fort Knox, located in southern Kentucky, is home of Cavalry and Armor, and the depository of the U. S. Department of the Treasury store of gold bullion. As a center for Army armor testing, research, and training, the installation is a key element in the nation's defense. Fort Knox covers more than 106,861 acres in Hardin County, Kentucky, and with construction dating back to the early 1900's, this installation is historically significant with respect to the facilities and the mission.

Fort Knox is currently preparing an updated Installation Design Guide incorporating specific installation requirements. Land use, future development, and architectural compatibility are integral components of the Guide. Current Lodging room night requirements, Army guidance on Lodging facility design standards, and force protection construction standards required additional analysis and are incorporated into the recommendations of this Lodging Wellness Plan.

The character of Fort Knox's historical area is preserved and enhanced through the continued use of red brick and Georgian architecture. Medium to low sloped tile roofs, small window and exterior openings, and long, low building masses exemplify this desired architecture of the installation.

## Master Plan Summary

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Lodging facilities at Fort Knox were constructed in various phases and are located in several areas of the installation. A thorough condition and functional assessment of the existing buildings noted significant deficiencies. Additionally, renovation of these buildings to the new Lodging standards and building configuration design is not viable within the 50% threshold with the exception of one facility.

The largest Lodging area includes the 6 lodging buildings comprising Steindam Apartments and the adjacent 8 buildings comprising Craig Apartments, and it is in close proximity to Training Activity Centers. Other Lodging facilities on Fort Knox include the Newgarden building, near Highway 31W, and the Wickam House, near one of the two golf

courses on the installation. Wickam House is the newest facility and the only existing facility recommended to remain in the lodging inventory. .

The proposed Ft Knox Lodging Master Plan reflects the 581 Lodging room requirement with an initial replacement of over 80% of the existing Lodging buildings into a new Lodging facility. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration. This facility, in conjunction with the existing Wickam Lodging facility (building 7961), will combine required rooms, public areas and service functions into a cohesive Lodging physical plant in support of the installation requirements.

Siting of the new 492 room Lodging facility is recommended on Cornwell Street, across the parade grounds from the existing HQ USAREC building. This site is located in the center of the installation, in close proximity to a majority of the community facilities and adjacent to open park-like areas.

This plan recommends retaining the rooms in building 7961 (Wickam House), based on current condition and configuration, and limiting renovation work in this building specifically to the removal of back-of-the-house and public spaces no longer required after a new Lodging facility is constructed. Building 7961 has an overabundance of family suites based on the demand requirement. We recommend maintaining these rooms in lieu of reconfiguring to meet demand requirements.

## Existing Lodging Facilities

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### ***Lodging Building 856 and 857 (Knierim Apartments)***

Buildings 856 & 857, constructed in 1958, are 2-story facilities. Building 856 has 16 multi-room guest rooms, with one room on the first floor diverted for administrative use. Building 857 has 14 multi-room guest rooms. These facilities are in poor condition and do not meet current Army Lodging standards and cannot be reconfigured without significant reconstruction. The cost to make condition assessment improvements will exceed the 50% replacement cost. Although the cost to make condition assessment improvements is just over the 50% for building 856, it is our recommendation to remove this building from the lodging inventory due to the age of the building and because the rooms are over 600 s.f and do not meet Army Lodging functional requirements.

Our recommendation is to remove buildings 856 & 857 from the Lodging inventory, allowing the installation to determine an alternate use for the facilities. These facilities will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.

***Lodging Building 1004 (Thunderbolt Lodge)***

Building 1004, constructed in 1934, received a major renovation in 1999. The building consists of 1 DVQ suite, is in poor condition, and does not meet new Lodging requirements. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove building 1004 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.



***Lodging Buildings 1117 (Yeoman Hall)***

Building 1117, constructed in 1935, has the equivalent of 10 family suites. This facility does not meet current Lodging standards and is in poor condition. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove building 1117 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.



***Lodging Building 1120 (Henry House)***

Building 1120, constructed in 1934, has the equivalent of one multi-room family suite. This building is in poor condition and does not meet current Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove building 1120 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.



***Lodging Buildings 2441, 2443, 2444, 2445, 2446, 2447, 2448, and 2449 (Craig Apartments)***



These eight buildings, constructed in 1962, are located near the training area of the installation. Each building has 12 family suites, although Building 2443 has diverted one room to administrative uses. These buildings are in poor condition and do not meet current Army Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove these buildings from the Lodging inventory, allowing the installation to determine an alternate use for the facilities. These facilities will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.

***Lodging Buildings 2602, 2603, 2604, 2605, 2606, 2607, and 2608 (Steindam Apartments)***



These seven buildings, constructed in 1974, are located near the training area and house extended stay rooms, with the exception of building 2608. Building 2602 has 26 rooms, 2603 has 44 rooms, 2604 has 8 rooms, 2605 has 24 rooms, 2606 has 26 rooms and 2607 has 45 rooms. Building 2608 houses administrative and supply storage functions only. These buildings are in poor condition and do not meet current Army Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove these buildings from the Lodging inventory, allowing the installation to determine an alternate use for the facilities. These facilities will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.

***Lodging Building 4016 (St. George House)***



Building 4016, constructed in 1942, has the equivalent of 1 DVQ family suite. This building is in poor condition and does not meet current Army Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove building 4016 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.



### ***Lodging Building 4770 (Newgarden Apartments)***

Building 4770, constructed in 1954, is located near Highway 31W, and it houses 16 family suites, 180 extended stay rooms, and the majority of the current Lodging support functions for the installation. The building is in very poor condition and does not meet current Army Lodging standards. The cost to make condition assessment improvements will exceed the 50% replacement cost.

Our recommendation is to remove building 4770 from the Lodging inventory, allowing the installation to determine an alternate use for the facility. This facility will be removed from the Fort Knox Wellness Solution and Lodging Master Plan.



### ***Lodging Building 7961 (Wickam Guest House)***

Building 7961, constructed in 1998, is the newest Lodging facility on the installation and is located adjacent to one of two golf courses. This building houses 55 standard rooms, 50 family suites, and some of the current Lodging support functions for the installation. The building is in good condition and meets a majority of the current Army standards. The cost to make improvements and bring this building up to the new standards will not exceed the 50% replacement cost.

Our recommendation is to retain building 7961 in the Lodging inventory and continue to serve as part of the Fort Knox Wellness Solution and Lodging Master Plan.

## **New Lodging Building**

The proposed new Lodging facility includes 492 rooms; 43 standard guest rooms and 449 extended stay rooms. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration. The lobby and back-of-the-house spaces are sized for the 597 total Lodging rooms at the installation.

The proposed new construction will be sited on Cornwell Street, across the parade grounds from the existing HQ USAREC building and adjacent to open common areas. The lobby will be constructed of glass exterior curtain walls to enhance the approach to the building and adjacent green space, while allowing maximum view and circulation. The proposed building construction will follow the Georgian architectural style on the installation and will be steel frame with CMU infill walls, sloped tile roof,



and red brick exterior veneer. The architectural guidance for Fort Knox is very specific and is incorporated into the cost of the new facility.

The mass and scale of the proposed building is critical. Based on the number of required rooms and to limit the length of the wings, the recommendation of this plan is to provide varying roof levels to promote interest and character, while providing relief from the scale of the facility. The core area will maintain a 5-story height including the 4 room wings, and the entrance will be emphasized by a single story height, covered drop-off area, providing a pedestrian scale and interest.

### ***Areas and Occupancy***

The following chart indicates all spaces and size for the proposed new construction based on program and the proposed conceptual building plan.

ROOM / SPACE	PROGRAMMED FLOOR AREA			PLAN FLOOR AREA
	No. Req'd	Net Area Per Room	Total Net Area	
<b>Total Area including 9% Add On Factor</b> (does not include Outside Areas)*			<b>243,748</b>	<b>251,230</b>
<b>Public Areas</b>			<b>60,290</b>	<b>63,556</b>
Exterior Entrance	N/A	N/A		-
Vestibule	1	1	-	-
Lobby (includes vestibule)	1	1,000-1,200	1,000-1,200	1,338
Front Desk	3 stations	250	250	300
Bell Cart Station	6	12	72	71
Breakfast Bar (Seat/Svc) - min.	1	550	550	581
Passenger Elevators	2 elev. @ 5 floors	64	640	645
Stairs	8	230	9,200	6,637
Public Corridors	-	-	40,000	40,095
Public Telephone Area	4	6	24	24
Vending - Full Service	3	70	210	1,646
Vending - Ice Only	2	30	60	319
Women - Lobby	1	315	315	261
Men - Lobby	1	315	315	261
Multi-Purpose Room - (250 s.f. min.)	1	250	250	384
Study Rooms (1 per 25 ext stay units)	18	250	4,500	6,552
Guest Laundries (2 sets w/d per 75 units)	7	192	1,344	3,064
Gear Wash Rooms - (170 s.f. min.)	8	170	1,360	1,378
Guest Bulk Storage (1 per 4 family suites)	-	25 ea. 40 w/circ.	-	-
<b>Guest Rooms</b>	<b>492</b>		<b>147,600</b>	<b>147,600</b>
Guest Room - Standard	43	300	12,900	12,900
Guest Room - Ext. Stay	449	300	134,700	134,700
Guest Room - Family Suites		450	-	-

ROOM / SPACE	PROGRAMMED FLOOR AREA			PLAN FLOOR AREA
	No. Req'd	Net Area Per Room	Total Net Area	
<b>Total Area including 9% Add On Factor</b> (does not include Outside Areas)*			<b>244,103</b>	<b>251,230</b>
<b>Back-of-House Areas</b>			<b>15,732</b>	<b>19,915</b>
Manager's Office	1	180	180	180
Assistant Manager Offices	1	120	120	129
Front Office Manager	1	100	100	111
Admin. Offices	7 staff	800-900	800-900	844
Cash Room	1	125	125	100
Luggage Storage	1	100	100	108
Admin. Conference Room	1	350	350	384
Housekeeping Office	1	120	120	150
Dirty/Clean Linen Storage	-	200	-	-
In-House Laundry - (500 s.f. minimum)	1	750	750	751
Receiving Office	1	75	75	100
Maintenance Area	1	400	400	399
Kitchen Prep Room	1	150	150	170
Break Room	1	350	350	347
Staff Toilet - Men	1	150	150	100
Staff Toilet - Women	1	200	200	100
Access Corridor	-	-	630	631
Receiving -min.	1	150	150	275
Housekeeping Rooms	1 per 15 units	128	4,224	4,740
Service Elevator	1	80	400	83
Data/Commo Room	1	150	150	149
Switch Closets	10	16	160	1,318
Janitor Closet	1	50	50	108
Mechanical Room	-	-	4,114	4,091
General Storage Room - (500 s.f. min.)	1	500	500	1,853
Bulk Storage Room - (500 s.f. min.)	1	500	500	1,383
Electrical Room	5	140	700	1,241
Elevator Equipment Room	1	84	84	70
<b>Exterior</b>			<b>400</b>	
Playground (Outdoor)	1	-	-	-
Grounds Maintenance	1	400	400	-

\* Add on factor to cover s.f. for partitions and any space not included in numbers above.

### Cost Summary

The New Construction Cost \$49,571,090

- The cost is for a building of 492 rooms.
- All costs are adjusted by the Area Cost Factor of 105% for Fort Knox.

### Cost Analysis

#### Summary of Project Replacement Cost (based on 251,230 s.f.)

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.36%</b>	<b>\$789,512.17</b>
Parking Lots		\$432,516.00
Site Earthwork		\$356,996.17
<b>03 Concrete</b>	<b>25.63%</b>	<b>\$8,582,734.40</b>
Floor Construction		\$6,811,226.90
Slab on Grade		\$264,384.75
Stair Construction		\$185,220.00
Standard Foundations		\$1,321,902.75
<b>04 Masonry</b>	<b>3.50%</b>	<b>\$1,170,755.51</b>
Exterior Walls		\$1,170,755.51

<b>07 Thermal &amp; Moisture Protection</b>	<b>4.06%</b>	<b>\$1,358,509.56</b>
Roof Construction		\$710,280.32
Roof Coverings		\$648,229.23
<b>08 Doors &amp; Windows</b>	<b>7.97%</b>	<b>\$2,667,702.45</b>
Exterior Doors		\$49,466.55
Exterior Windows		\$2,108,400.00
Interior Doors		\$509,835.90
<b>09 Finishes</b>	<b>17.42%</b>	<b>\$5,833,804.44</b>
Ceiling Finishes		\$1,637,335.81
Floor Finishes		\$2,159,254.66
Partitions		\$1,142,098.63
Wall Finishes		\$895,115.34
<b>10 Specialties</b>	<b>0.01%</b>	<b>\$3,558.98</b>
Fittings		\$3,558.98
<b>11 Equipment</b>	<b>5.01%</b>	<b>\$1,677,489.98</b>
Commercial Equipment		\$25,410.00
Other Equipment		\$1,652,079.98
<b>13 Special Construction</b>	<b>4.75%</b>	<b>\$1,591,570.91</b>
Communications & Security		\$716,471.29
Sprinklers		\$875,099.62
<b>14 Conveying Systems</b>	<b>0.67%</b>	<b>\$225,540.00</b>
Elevators and Lifts		\$225,540.00
<b>15 Mechanical</b>	<b>14.47%</b>	<b>\$4,845,386.70</b>
Cooling Generating Systems		\$2,115,044.40
Domestic Water Dist		\$933,660.00
Plumbing Fixtures		\$1,796,682.30
<b>16 Electrical</b>	<b>6.80%</b>	<b>\$2,275,873.43</b>
Electrical Service & Distribution		\$2,259,740.18
Site Lighting		\$16,133.25
<b>19 FF&amp;E</b>	<b>7.35%</b>	<b>\$2,460,000.00</b>
Interior FF&E allowance		\$2,460,000.00
Total Raw Cost	100.00%	\$33,482,438.51
<b>Additional Hard Cost (Template: Army Lodging New Construction)</b>		
<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$184,153.41
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$3,348,243.85
<b>Total Additional Hard Cost</b>		<b>\$3,663,243.72</b>
<b>Soft Cost (Template: Army Lodging New Construction)</b>		
<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$1,850,741.79
SIOH Conus	6.50%	\$2,526,262.54
Design	10.00%	\$3,701,483.58
08 MYr Inflation Fct	9.93%	\$4,477,767.04
<b>Total Soft Cost</b>		<b>\$12,556,254.95</b>
<b>Total Project Cost for Replacement</b>		<b>\$49,571,090.73</b>



**INSERT PROPOSED CAMPUS AREA ANALYSIS DRAWING HERE**

**INSERT LODGING MASTER PLAN DRAWING HERE**

**INSERT PROPOSED LODGING FACILITY DRAWINGS (FLRS. 1-5) HERE**

### **Section 3**

### **Demand**

### **Analysis**

Fort Knox's mission is to prepare mounted force warriors for full spectrum combat operations. Fort Knox features the U.S. Army Armor Center along with the U.S. Army Armor School, U.S. Army Accessions Command, Second Region ROTC, and the University of Mounted Warfare. Training classes offered include the Armor Officer Basic Course, the Armor Captain Career Course, the Tank Commander Certification, the Pre-Command Course, the Maintenance Leader Course, the Master Gunner Course, basic and AIT training, and the Advanced Noncommissioned Officer Course (ANOC). Additional course offerings were added in 2002, including the Battle Lab Initiative and the Tactical Vehicle Test.

The population at the installation has fluctuated over the past five years. There was a 15% increase in population between 1998 and 1999, and a decline of 14% in September 2001. Population then increased by 7.5% in 2002. Fluctuations in past populations directly relate to the addition or elimination of various training programs. Total population is projected to remain near the 2002 level for the next five years; this leveling of population is expected due to installation space limitations.

The greatest demand for Lodging at Fort Knox is generated from students and trainees; accordingly, the percentage of demand that represents those on Temporary Duty (TDY), 86%, reflects this. Permanent Change of Station (PCS) demand represents 6% of the demand for Lodging. Most of the training programs extend for more than three months, influencing a longer average length of stay. Approximately 8% of demand is related to unofficial travel; many of these travelers are family and friends attending graduation or retirees using the medical center. Unofficial demand is not used in the calculation of recommended room inventory. The table below describes the official demand population at this installation.

<b>Fort Knox</b> <b>Official Market Demand Analysis</b>		
	<b>TDY</b>	<b>PCS</b>
<b>Total Demand:</b>	86%	6%
<b>Market Segmentation:</b>		
Individuals	100%	< 10%
Families	0%	> 90%
<b>Average Length of Stay (Days):</b>		
14 days or less	18% (3 days)	76% (5 days)
More than 14 days	82% (78 days)	24% (26 days)

*Source: Fort Knox Lodging Administration, compiled by 3D/I*

## On Post Inventory

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There currently are 614 lodging units in 22 buildings, with virtually all of the rooms having either a full kitchen or a kitchenette. Ten rooms have shared baths.

## Demand and Utilization

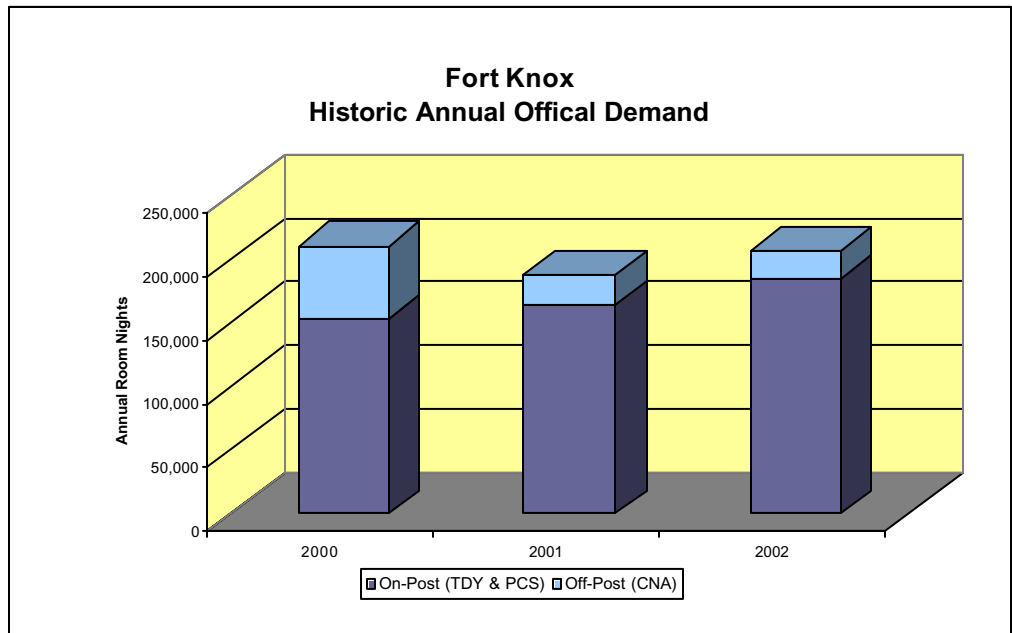
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### **Data Summary**

Data for 1998 and 1999 were incomplete; we only have reliable numbers for a three-year historic comparison. The three-year average for demand, inclusive of Certificates of Non-Availability (CNAs), was 552 room nights per day. Lodging experienced a short-term decline in 2001 while official demand for 2000 and 2002 are comparable. The annual average daily room demand was 577, 514, and 567 in 2000, 2001, and 2002.

On a monthly basis, CNAs have averaged from a range of 38 to 323 room nights per day in 2000, and averaged 17 to 156 room nights per day in 2002.

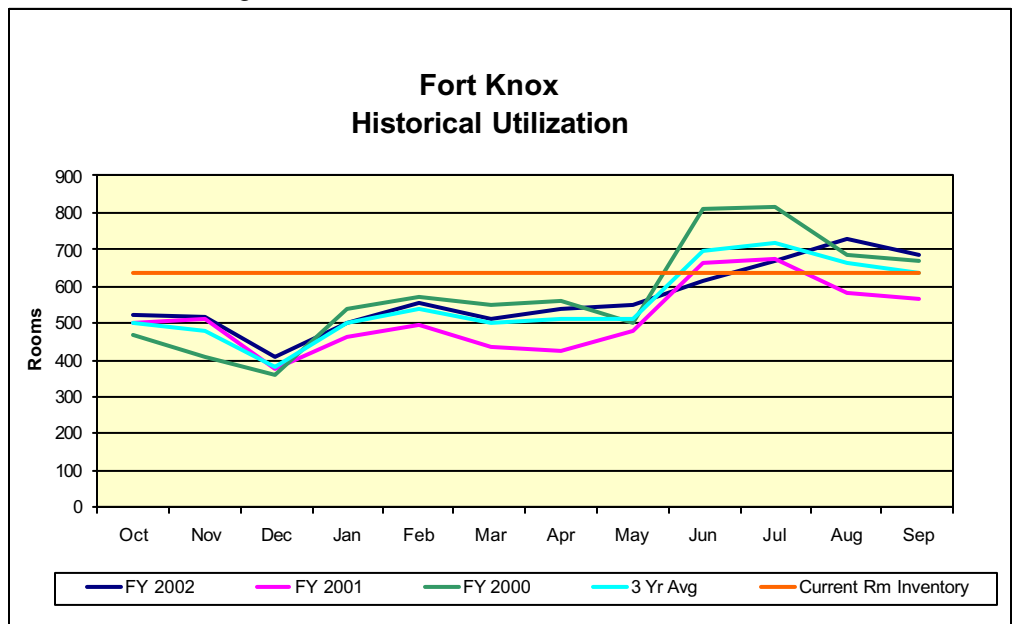
A summary of historical data is presented in the chart below; it identifies the annual official demand both on and off post.



Source: Fort Knox Lodging Administration, compiled by 3D/I

During the last three years, annual occupancy increased from 79% in 2000 to 88% in 2002. The annual rates of occupancy change were 3% in 2001 and another 9% in 2002. During this time, TDY utilization increased 23% while unofficial utilization decreased by 67%. The decrease in unofficial travelers is dramatic; however, unofficial travel only comprised a minimal amount of total demand on a historical basis.

A summary of historical utilization data by month is presented in the following chart.



Source: Fort Knox Lodging Administration, compiled by 3D/I

Monthly variances between years have been insignificant, reflecting the stable nature of demand trends at this installation.

### ***Seasonality***

There is seasonality in the demand cycle for Lodging at Fort Knox. As is typical of military installations, peak demand occurs during June, July, and August. Demand in September is also strong, averaging 639 to 717 rooms per night. Other than the holiday decline in December, when the three-year average number of rooms drops to 381, the monthly room demand varies between 479 and 540 rooms during the remaining eight months of the year.

### ***Factors Influencing Demand***

The most significant change impacting Lodging was the installation of room blocking for classes in 2001. Through this process, the Lodging office set aside blocks of rooms to meet the needs of incoming classes, which in turn ensured the availability of rooms for the longer-term stays of those students attending the installation's programs. By instituting this new blocked room program, the post reduced its CNAs by more than 50%, from 56,842 in 2000; to 23,567 and 22,118 in 2001 and 2002, respectively.

There are 3,380 family housing units at Fort Knox. Future plans will reduce the total number of housing units by 392 and privatize the program in 2006. Because 76% of the PCS demand stays for less than 15 days, and the population is expected to remain stable on Fort Knox, demand for Lodging from the PCS segment is not expected to change dramatically over the next two to five years.

## **Private Market Capability**

The commercial lodging market within a 30-minute rush-hour driving time radius of the installation offers approximately 1,305 rooms. It is estimated that more than 70% of these rooms are located in properties represented by the major lodging chains, and the majority of these are limited-service, economy properties.

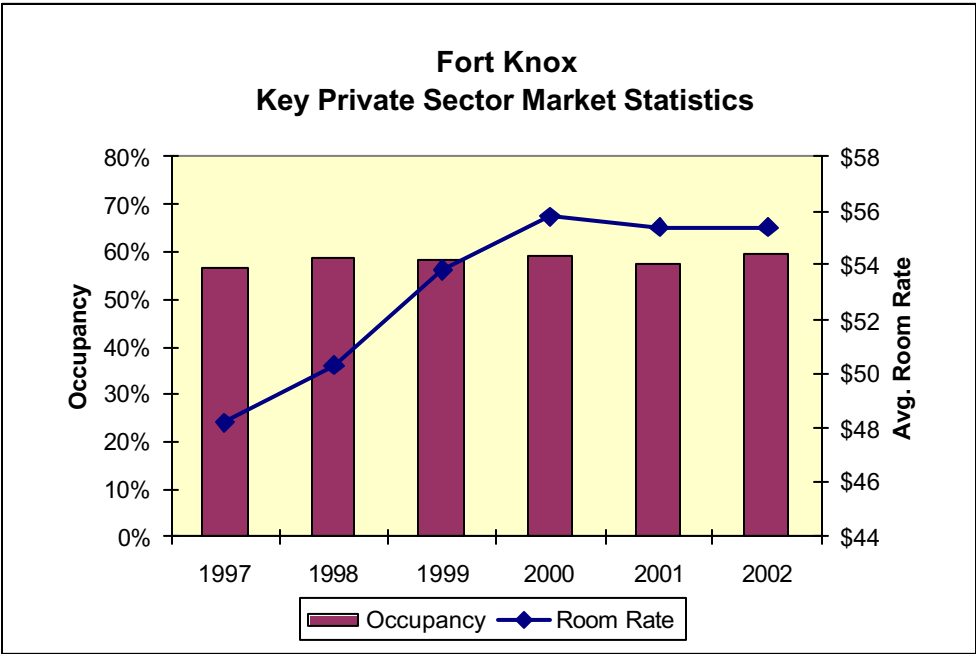
There are no other military lodging operations within a 30-minute rush-hour driving time radius of the installation.

The market is relatively soft, with average daily rate (ADR) demonstrating little change the last three years; moreover, occupancy remains below

60%. While monthly occupancies demonstrate some seasonality with summer strengthening, minimal CNAs generated by the installation are easily accommodated off post.

The ADR has increased less than 15% during the last five years. The 2002 ADR of \$55 is greater than the average government rate charged to military personnel staying off post at the referred hotels, which is \$46. Because a lower rate relative to the per diem is easily obtained within the market, we have utilized a reduced rate in our quantitative analysis of approximately \$48.

The chart below describes key Private Market statistics.



Source: Smith Travel Research, compiled by 3D/I

In summary, it is reasonable to assume from the data that—although some off post facilities are older, of lesser quality, and offer limited amenities—the Private Market does have sufficient capacity to support the overflow lodging requirements that Fort Knox personnel may encounter.

### Demand Requirement Determination

Overall demand, including unofficial travelers, has shown stable trends in recent years. These trends are not expected to change significantly in



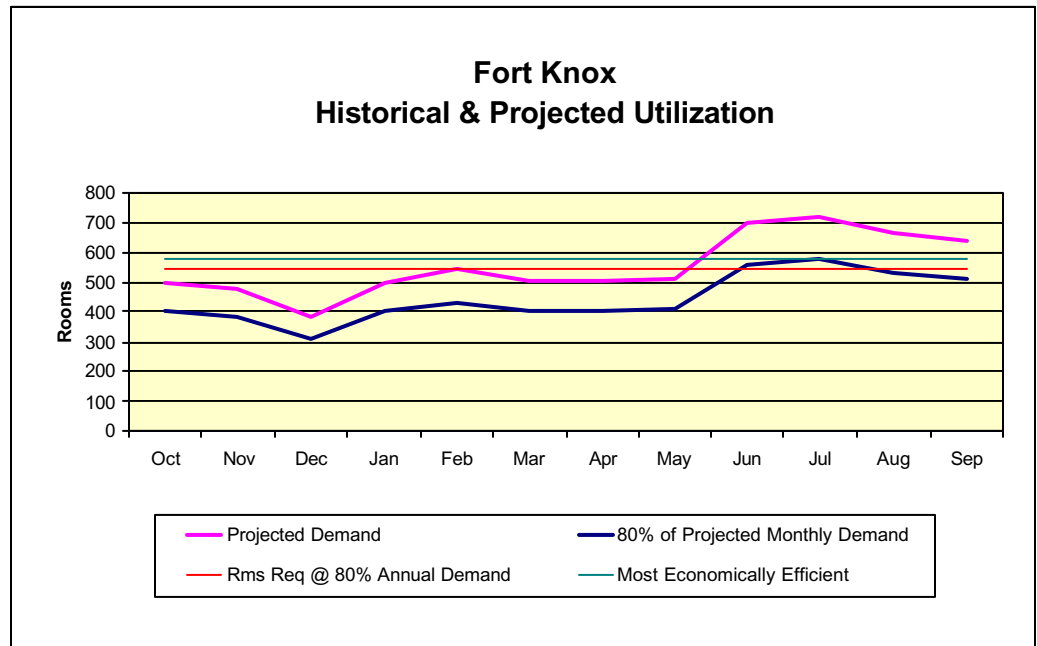
the future; therefore, demand from the past three years is used as a basis for our projections.

Because of the variation in monthly demand within years, the average demand for the last three years should also be normalized. Normalization is a process that eliminates the monthly demand peaks or valleys where official demand is 20% greater or 20% less than the three-year average. Variations greater or less than 20% are atypical and not likely to recur. The normalization process did not adjust the demand for Fort Knox due to its consistent, historical demand trends.

The objective of the Core Lodging Requirement is to provide sufficient lodging to meet 80% of the official demand. Using this criterion, the total number of rooms required on an annualized basis is 547, generating occupancy of 89%.

Another factor in determining the number of rooms to be provided at the installation is the application of the “Most Economically Efficient” criterion. This measure compares the cost of having a vacant room to the incremental cost of lodging personnel off post. When the costs of these scenarios are at equilibrium, the most cost efficient number of rooms will be provided from an operational cost perspective. The number of rooms required to achieve this equilibrium for the installation is 581 rooms. With a room inventory of 581 rooms, the expected occupancy is 89% and 85% of the official demand being met.

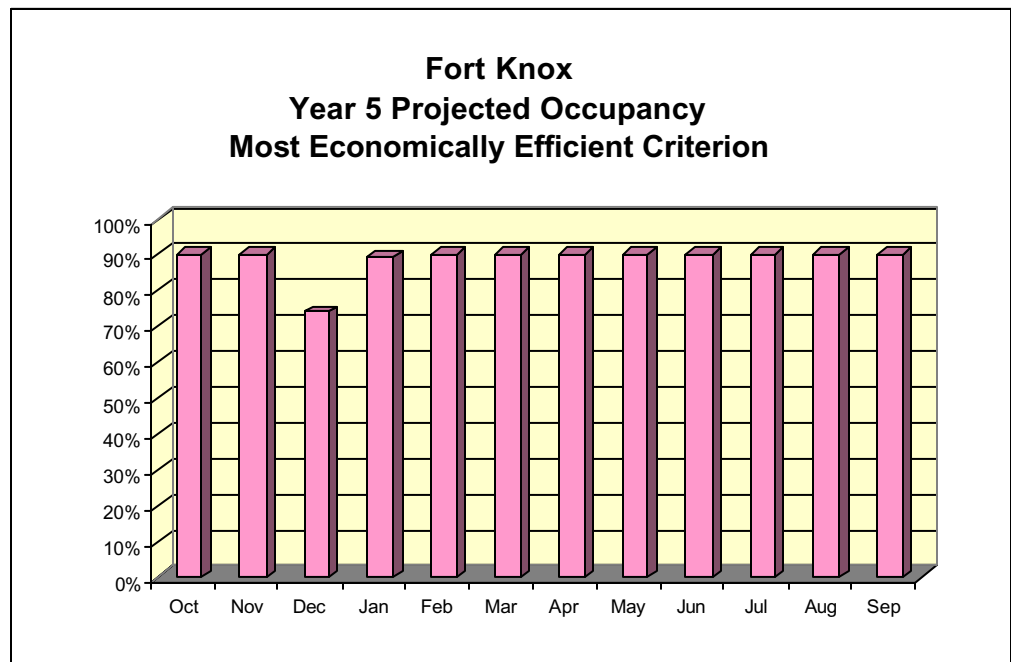
The chart below compares the pertinent potential alternatives to room inventory to the projected demand.



Source: Fort Riley Lodging Administration and 3D/I

Based on the demand pattern at this facility and the anticipated future demand, we recommend that the number of rooms to be sized using the “Most Economically Efficient” criterion. The consistent demand for Lodging throughout the year makes it more cost effective to lodge personnel on post than sending them off post. Also, if the 80% of Official Demand criterion were used, approximately 21,500 room nights would be sent off post, an effect that does not support the logistical opportunity gained by keeping classes in tact on post. An anticipated average daily rate of \$40.50 is forecasted in FY 08 dollars.

The chart below presents the expected occupancy percentage on a monthly basis.



Source: 3/DI

Using the “Most Economically Efficient” criterion, the average occupancy is 88%, and 89% of the official demand is met. On a monthly basis, occupancy has a variance from 70% in December to 95% in February through October.

## Summary and Recommendation

- The installation’s population has grown approximately 7.5% over the last five years and is anticipated to remain fairly constant over the next five years
- The Private Market does have sufficient capacity to support the overflow lodging requirements that Fort Knox personnel may encounter
- Official demand has been consistent over the last three years, with a slight decrease in 2001 and a recovery in 2002; the 2002 level is likely to be sustained
- The significant decrease in CNAs in 2001 was a result of new reservation procedures
- Based upon the pattern of demand at this installation and the anticipated future demand, plus the cost-effectiveness of lodging personnel on post, we recommend the number of rooms be sized

using the “Most Economically Efficient” criterion; this result generates an occupancy rate of 89%.

***Room Count and Mix Recommendation***

- 581 rooms
- Proposed room mix:
  - 98 standard guest rooms
  - 447 extended-stay guest rooms offering a kitchenette
  - 36 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette

### **Section 4 Facility Assessment and Plans**

Each Lodging facility is detailed in this section of the report. The outline of the detail is described below:

- **Summary of Existing Lodging Facility**
- **Significant Assumptions**, identifies criteria used for renovation / replacement cost models.
- **Cost Analysis**, summarizes recommendation based on cost.
- **Attributes**, describes number of rooms and configuration.
- **Condition Analysis and Recommendations** for each of the major systems of the building.
- **Major Functional Criteria Deficit**, describes any major Functional inadequacy based on Army standards.
- **Condition Assessment / Renovation / Replacement Analysis**
  - **Condition Assessment**, summarizes building system deficiencies grouped by CSI with additional hard cost and soft cost.
  - **Renovation**, summarizes building system costs plus functional renovation costs grouped by CSI with additional hard cost and soft cost.
  - **Replacement**, summarizes replacement cost grouped by CSI with additional hard cost and soft cost.



## Building 1004

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Building 1004 was constructed in 1934. The 2,200 square foot facility contains 1 lodging unit: 4 single bedrooms with full bathroom and kitchen. The building is functioning as a single DVQ.

### Significant Assumptions

The replacement and renovation cost models are based on 3 extended stay rooms and 1 family suite.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$256,420.00
Replacement Cost	\$483,895.00
Condition Assessment to Replacement Cost Ratio	52.99%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 1004 is not recommended.

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	1
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	3
15.Renovated to Family Suite	1
16.Delta renovation	3

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, and dresser in each bedroom; a couch, loveseat, easy chair, coffee table, end table in the living rooms; a formal dinette set in the dining room. All of them are in good condition. The soft goods consist of drapes and blinds on the windows, TV, mattress and box springs and bed coverings. All of them are in good condition.
- Recommendation: Replace all the hard and soft goods in guest rooms when they are no longer in good condition.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation consists of a concrete basement walls and concrete perimeter foundation wall and piers supporting l-beams over the crawl space. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a wood joist system supported by concrete perimeter wall and concrete piers. The second floor is a wood joist system that is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The steeply pitched roof is wood truss with wood 1x decking. The roof is supported by a wood frame structure. The superstructure is in good condition. The gutters are in fair condition.
- Recommendation: Replace the gutters.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are brick veneer and are in fair condition and the vinyl siding in good condition.
- Recommendation: Seal the cracks in the brick veneer and repoint.

#### **Exterior Windows**

- Analysis: The windows are wood, double-glazed sliders. They are in fair condition.
- Recommendation: Replace the windows.

### **Exterior Doors**

- Analysis: The doors are solid core wood doors in fair condition.
- Recommendation: Replace the exterior doors.

### **Roofing**

#### **Roof Coverings**

• Analysis: The sloped asphalt shingled roof is on wood deck. Gutters are exterior to the roof with the downspouts exposed. Shingles are in fair condition.

- Recommendation: Replace the the asphalt shingles and downspouts.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs. The partition walls are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The doors are solid core wood doors in wood frames and are in fair condition.
- Recommendation: Replace the interior doors.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in fair condition. The bathroom has a ceramic tile wainscot and a vinyl wall covering accent wall in fair condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms and full height ceramic tile in the bathrooms.

#### **Floor Finishes**

- Analysis: The units have wood floors in fair condition, the bathrooms have ceramic tile in good condition, and the kitchen has vinyl flooring in good condition.
- Recommendation: Install carpet in the living and bedroom areas. RegROUT the ceramic tile floors. Replace the vinyl composition tile with ceramic tile.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in fair condition.
- Recommendation: Paint the ceilings.

### **Plumbing**



### **Plumbing Fixtures**

- Analysis: This unit has two bathrooms. Each contains a water closet, a tub/shower combination, and a wall mounted lavatory. All fixtures are in good condition. The plumbing lines are original and are in fair condition.

- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains a 40-gallon gas hot water heater in fair condition. The piping is original and is in fair condition.

- Recommendation: Replace the gas hot water heater. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system consists of a split-system air conditioning system and a central air gas furnace. Both are in fair condition.

- Recommendation: Replace the central air system HVAC.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.

- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 100 amp main panel. It is in good condition. The electrical service has been upgraded but much of the wiring is still original and is considered to be in fair condition.

Lighting uses incandescent fixtures in good condition. The outlets in the building are not in sufficient quantity.

- Recommendation: Replace the branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of battery-powered smoke detectors located throughout the building. It is in poor condition.

- Recommendation: Replace the fire alarm system.

## **Equipment**

### **Other Equipment**

- Analysis: The building contain a kitchen that includes base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.

- Recommendation: Replace the kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt driveway and the concrete sidewalk are in fair condition.
- Recommendation: Replace the damaged sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in fair condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.85%</b>	<b>\$1,300.59</b>
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>04 Masonry</b>	<b>2.52%</b>	<b>\$3,836.77</b>
Brick Wall: Repoint		\$3,836.77
<b>06 Wood &amp; Plastics</b>	<b>2.95%</b>	<b>\$4,486.14</b>
Base Cabinets: Beyond Useful Life		\$1,919.41
Upper cabinets: Beyond expected useful life		\$2,566.73
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.62%</b>	<b>\$14,646.66</b>
Asphalt Shingle Roof: Beyond Useful Life		\$13,236.30
Gutters: Damaged or Failing		\$1,410.36
<b>08 Doors &amp; Windows</b>	<b>16.44%</b>	<b>\$25,033.38</b>
Wood Door - Beyond Useful Life		\$17,204.89
Wood Framed windows: Damaged or failing		\$7,828.49
<b>09 Finishes</b>	<b>13.95%</b>	<b>\$21,243.27</b>
Carpet: Beyond Useful Life		\$4,060.83
Drywall Ceilings: Damaged or Failing		\$695.52
Floor Tile: Damaged or Failing		\$291.99
Grout: Damaged or Failing		\$291.99
Interior ceilings: Paint Failing		\$1,131.21
Interior walls: Paint failing		\$877.21
Vinyl Wall Covering: Beyond expected useful life		\$10,739.15
Wall Tile: Damaged or Failing		\$3,155.37
<b>10 Specialties</b>	<b>0.11%</b>	<b>\$162.86</b>
BR Accessories: Replace due to remodel		\$162.86
<b>13 Special Construction</b>	<b>4.11%</b>	<b>\$6,256.06</b>
Fire Alarm System: Missing or Inadequate		\$1,106.70
Fire Sprinklers: Missing or Inadequate		\$5,149.36
<b>15 Mechanical</b>	<b>19.59%</b>	<b>\$29,825.46</b>
Domestic water system: Beyond expected useful life		\$3,006.71
Furnace: Beyond expected useful life		\$4,550.70
Sewage System: Beyond expected useful life		\$1,441.71
Sink & vanity: Replace due to remodel		\$1,622.67
Sink, janitorial: Beyond expected useful life		\$1,082.56
Sink, kitchen: Beyond expected useful life		\$2,543.10
Split System: Beyond expected useful life		\$6,888.00
Tub: Beyond expected useful life		\$3,327.87
Water closet: Beyond expected useful life		\$2,080.89
Water heater: Beyond expected useful life		\$3,281.25
<b>16 Electrical</b>	<b>16.72%</b>	<b>\$25,450.54</b>
Branch Circuits: Beyond Expected Useful Life		\$4,085.03
Building service: Beyond expected useful life		\$4,055.10

Fixture: Incandescent fixture beyond expected life		\$4,308.15
Fixtures, fluorescent: Beyond expected useful life		\$780.26
Inadequate exterior Lighting		\$12,222.00
<b>19 FF&amp;E</b>	<b>13.14%</b>	<b>\$20,000.00</b>
Hard and soft goods: Beyond expected useful life		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$152,242.00</b>

#### **Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$837.33
Force Protection	9.00%	\$15,147.32
General Conditions	10.00%	\$15,224.20
<b>Total Additional Hard Cost</b>		<b>\$31,208.85</b>

#### **Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$18,345.08
SIOH Conus	6.50%	\$13,116.74
Design	10.00%	\$18,345.08
08 MYr Inflation Fct	9.93%	\$23,162.50
<b>Total Soft Cost</b>		<b>\$72,969.40</b>
<b>Total Project</b>		<b>\$256,420.25</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.56%</b>	<b>\$11,620.61</b>
Parking Lots		\$3,990.00
Site Earthwork		\$7,630.61
<b>03 Concrete</b>	<b>15.13%</b>	<b>\$49,456.79</b>
Floor Construction		\$24,965.54
Slab on Grade		\$5,591.25
Stair Construction		\$7,717.50
Standard Foundations		\$11,182.50
<b>04 Masonry</b>	<b>12.21%</b>	<b>\$39,906.23</b>
Exterior Walls		\$39,906.23
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.33%</b>	<b>\$20,701.77</b>
Roof Construction		\$6,239.24
Roof Coverings		\$14,462.53
<b>08 Doors &amp; Windows</b>	<b>16.36%</b>	<b>\$53,479.65</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$33,600.00
Interior Doors		\$9,563.40
<b>09 Finishes</b>	<b>12.04%</b>	<b>\$39,348.20</b>
Ceiling Finishes		\$6,167.04
Floor Finishes		\$14,227.73
Partitions		\$10,501.36
Wall Finishes		\$8,452.08
<b>11 Equipment</b>	<b>4.50%</b>	<b>\$14,700.00</b>
Other Equipment		\$14,700.00
<b>13 Special Construction</b>	<b>4.12%</b>	<b>\$13,463.73</b>
Communications & Security		\$6,060.92
Sprinklers		\$7,402.82
<b>15 Mechanical</b>	<b>11.84%</b>	<b>\$38,682.00</b>
Cooling Generating Systems		\$17,892.00
Domestic Water Dist		\$8,505.00
Plumbing Fixtures		\$12,285.00
<b>16 Electrical</b>	<b>7.80%</b>	<b>\$25,483.50</b>
Electrical Service & Distribution		\$23,178.75
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>6.12%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$326,842.48</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,797.63
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$32,684.25
<b>Total Additional Hard Cost</b>		<b>\$34,481.88</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$18,066.22
SIOH Conus	6.50%	\$24,660.39
Design	10.00%	\$36,132.44
08 MYr Inflation Fct	9.93%	\$43,710.21
<b>Total Soft Cost</b>		<b>\$122,569.25</b>
<b>Total Project Cost for Replacement</b>		<b>\$483,893.61</b>

**INSERT BUILDING 1004 FLOOR PLANS HERE**



Front view. Note ongoing exterior painting.

## Building 1117

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Building 1117 (Yeoman Hall) was constructed in 1935. The 16,753 square foot facility contains 10 DVQ lodging suites. The building is functioning as 10 family units. A portion of the first floor is not used for lodging purposes.

### Significant Assumptions

The replacement and renovation cost models are based on 10 family suites.

The renovation uses the existing footprint, with the plan reworked to meet current lodging size requirements.

The renovation cost includes all condition assessment costs.

The renovation and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule.

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,300,640.00
Replacement Cost	\$1,250,480.00
Renovation to Replacement Cost Ratio	104.01%

Because the Renovation to Replacement Cost Ratio is greater than 50%, renovation of Building 1117 is not recommended.

## Attributes

01.Number of Units Constructed	10
02.Number of Units Used	10
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	10
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	10
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	10
16.Delta renovation	0



## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, and nightstand in each bedroom; a couch, easy chair, and end table in the living rooms. All of them are in good condition. The soft goods consist of drapes and blinds on the windows, TV, mattress and box springs and bed coverings. All of them are in good condition.
- Recommendation: Replace all the hard and soft goods in guest room.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation consists of a concrete basement walls. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a concrete slab supported by basement walls and concrete columns. The second floor is a concrete slab system in good condition. The second floor balcony is in poor condition.
- Recommendation: Replace the masonry flooring material on the balcony and replace the balcony railing.

#### **Roof Construction**

- Analysis: The steeply pitched roof is a wood truss with wood 1x decking. The roof decking is in poor condition. The roof is supported by a concrete frame and masonry walls. The superstructure is in good condition.
- Recommendation: Replace the roof decking, gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are brick veneer in good condition.
- Recommendation: Repoint the walls.

#### **Exterior Windows**

- Analysis: The windows are wood, single-glazed sliders in fair condition.
- Recommendation: Replace the windows.

### **Exterior Doors**

- Analysis: The doors are solid core wood doors, most with glazing, in fair condition.
- Recommendation: Paint the exterior doors.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof covering is a clay or concrete tile in fair condition. The insulation in the attic is in poor condition.
- Recommendation: Replace the tile roof. Replace the attic insulation.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are plaster on wood studs and plaster on masonry. The partition walls are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The doors are solid core wood doors in wood frames and are in fair condition.
- Recommendation: Replace the interior doors.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are concrete with metal handrails and balusters. The treads and risers are surfaced with marble. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted plaster in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in the living area/bedrooms. Grout the bathroom tile.

#### **Floor Finishes**

- Analysis: The units have carpet in fair condition and the the bathrooms have ceramic tile in good condition.
- Recommendation: Replace the carpet and regrout the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted plaster in good condition.
- Recommendation: Paint the ceilings and replace the acoustical ceiling tile.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and a wall mounted lavatory. All of the fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: The building contains a gas boilers with an accompanying hot water tank. The boiler system is in poor condition. The piping is original and is in poor condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and a chilled water system with one thermostat to control the entire building. One gas boiler located in the mechanical room is in poor condition. There is one chillers located adjacent to building in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120/208Y volt, 600 amp main panel in poor condition. The wiring is still original and is considered to be in poor condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition. Outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

#### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department and is in good condition. Emergency lighting and exit lights are in good condition.
- Recommendation: Replace the fire annunciation system.

### **Equipment**

#### **Other Equipment**

- **Analysis:** The building contains a breakfast preparation room containing a kitchen with base and wall cabinets, a stove, a sink, a microwave, and full size refrigerator. The kitchen furnishings are in good condition. The laundry room has a folding table in fair condition.
- **Recommendation:** Replace the kitchen cabinets. Replace the laundry folding table.

## **Site Preparation**

### **Site Earthwork**

- **Analysis:** The site consists of grass covered yard areas, trees, and shrubs in good condition.
- **Recommendation:** No corrective action required.

## **Site Improvements**

### **Parking Lots**

- **Analysis:** The asphalt driveway is in fair condition.
- **Recommendation:** Replace the asphalt driveway.

## **Site Electrical Utilities**

### **Site Lighting**

- **Analysis:** The site lighting is in fair condition.
- **Recommendation:** Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**  
Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.
- **Family Guest Suite**  
Room Size and Configuration: The rooms do not meet size and configuration requirements.  
Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.
- **Public Spaces**  
Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.08%</b>	<b>\$634.08</b>
Parking: AC Pavement Damaged or Failing		\$634.08
<b>04 Masonry</b>	<b>1.03%</b>	<b>\$7,922.88</b>
Brick Wall: Repoint		\$7,922.88
<b>05 Metals</b>	<b>0.55%</b>	<b>\$4,212.60</b>
Railings - Inadequate or Missing		\$4,212.60
<b>07 Thermal &amp; Moisture Protection</b>	<b>14.37%</b>	<b>\$110,955.38</b>
Built-up Roof: Beyond Useful Life		\$4,951.38
Fiberglass Insulation: Damaged or Failing		\$7,119.16
Gutters: Damaged or Failing		\$3,832.50
Roof Deck Insulation: Damaged or Failing		\$2,794.24
Tile Roof Beyond Usefull Life		\$91,866.58
Wall flashing Damaged or Failing		\$391.52
<b>08 Doors &amp; Windows</b>	<b>3.25%</b>	<b>\$25,113.00</b>
Wood Door - Beyond Useful Life		\$10,866.24
Wood Framed windows: Damaged or failing		\$14,246.76
<b>09 Finishes</b>	<b>18.77%</b>	<b>\$144,960.86</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$12,296.36
Carpet: Beyond Useful Life		\$14,008.10
Door and Frame: Paint Failing or Damaged		\$774.59
Floor Tile: Damaged or Failing		\$13,205.76
Interior ceilings: Paint Failing		\$3,446.29
Interior walls: Paint failing		\$3,072.10
Quarry Floor Tile: Damaged or Failing		\$21,165.81
VCT: Beyond Useful Life		\$865.10
Vinyl Wall Covering: Beyond expected useful life		\$48,780.34
Wall Tile: Damaged or Failing		\$27,346.41
<b>10 Specialties</b>	<b>0.14%</b>	<b>\$1,058.56</b>
BR Accessories: Replace due to remodel		\$1,058.56
<b>13 Special Construction</b>	<b>7.86%</b>	<b>\$60,727.21</b>
Fire Sprinklers: Missing or Inadequate		\$60,727.21
<b>15 Mechanical</b>	<b>29.35%</b>	<b>\$226,630.03</b>
Boiler: Beyond expected useful life		\$574.35
Boiler: Damaged or failing		\$15,486.98
Domestic water system: Beyond expected useful life		\$35,393.44
Hot water storage tank: Damaged or failing		\$4,979.63
Hydronic heating system: Beyond expt useful life		\$14,650.39
PTAC: Missing or inadequate		\$63,017.64
Restroom exhaust: Damaged or failing		\$15,058.21
Sewage System: Beyond expected useful life		\$16,986.13
Shower: Beyond expected useful life		\$27,008.10
Sink & vanity: Replace due to remodel		\$12,170.03

Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$2,543.10
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$14,566.23
<b>16 Electrical</b>	<b>18.13%</b>	<b>\$140,001.24</b>
Branch Circuits: Beyond Expected Useful Life		\$48,107.41
Fixture: Incandescent fixture beyond expected life		\$63,631.29
Fixtures, fluorescent: Beyond expected useful life		\$2,860.94
Inadequate exterior Lighting		\$915.60
Main service: Beyond expected useful life		\$24,486.00
<b>19 FF&amp;E</b>	<b>6.47%</b>	<b>\$50,000.00</b>
Hard and soft goods: Beyond expected useful life		\$50,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$772,216.00</b>

#### **Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$4,247.19
Force Protection	9.00%	\$76,831.63
General Conditions	10.00%	\$77,221.60
<b>Total Additional Hard Cost</b>		<b>\$158,300.42</b>

#### **Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$93,051.64
SIOH Conus	6.50%	\$66,531.92
Design	10.00%	\$93,051.64
08 MYr Inflation Fct	9.93%	\$117,486.96
<b>Total Soft Cost</b>		<b>\$370,122.16</b>
<b>Total Project</b>		<b>\$1,300,638.58</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.98%</b>	<b>\$33,627.69</b>
Parking Lots		\$8,778.00
Site Earthwork		\$24,849.69
<b>03 Concrete</b>	<b>17.14%</b>	<b>\$144,741.99</b>
Floor Construction		\$81,983.49
Slab on Grade		\$18,348.75
Stair Construction		\$7,717.50
Standard Foundations		\$36,692.25
<b>04 Masonry</b>	<b>7.87%</b>	<b>\$66,510.39</b>
Exterior Walls		\$66,510.39
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.91%</b>	<b>\$66,787.50</b>
Roof Construction		\$21,097.76
Roof Coverings		\$45,689.75
<b>08 Doors &amp; Windows</b>	<b>10.40%</b>	<b>\$87,808.35</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$58,800.00
Interior Doors		\$18,692.10
<b>09 Finishes</b>	<b>15.11%</b>	<b>\$127,605.53</b>
Ceiling Finishes		\$20,981.90
Floor Finishes		\$36,874.92
Partitions		\$36,734.20
Wall Finishes		\$33,014.52
<b>11 Equipment</b>	<b>4.35%</b>	<b>\$36,750.00</b>
Other Equipment		\$36,750.00
<b>13 Special Construction</b>	<b>5.23%</b>	<b>\$44,177.47</b>
Communications & Security		\$19,887.20
Sprinklers		\$24,290.27
<b>15 Mechanical</b>	<b>13.94%</b>	<b>\$117,770.10</b>
Cooling Generating Systems		\$58,707.60
Domestic Water Dist		\$28,350.00
Plumbing Fixtures		\$30,712.50
<b>16 Electrical</b>	<b>8.15%</b>	<b>\$68,850.08</b>
Electrical Service & Distribution		\$66,545.33
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.92%</b>	<b>\$50,000.00</b>
Interior FF&E allowance		\$50,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$844,629.09</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$4,645.46
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$84,462.91
<b>Total Additional Hard Cost</b>		<b>\$89,108.37</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$46,686.87
SIOH Conus	6.50%	\$63,727.58
Design	10.00%	\$93,373.75
08 MYr Inflation Fct	9.93%	\$112,956.30
<b>Total Soft Cost</b>		<b>\$316,744.50</b>
<b>Total Project Cost for Replacement</b>		<b>\$1,250,481.96</b>



**INSERT BUILDING 1117 FLOOR PLANS HERE**



Front exterior - Henry House.

## Building 1120

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Building 1120 (Henry House) was constructed in 1934. The 2,458 square foot facility contains 1 lodging unit: 4 single bedrooms with full bathroom and kitchen. The building is functioning as a single DVQ.

### Significant Assumptions

The replacement and renovation cost models are based on 2 extended stay rooms and 2 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$272,600.00
Replacement Cost	\$521,640.00
Condition Assessment to Replacement Cost Ratio	52.26%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 1120 is not recommended.

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	1
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	2
15.Renovated to Family Suite	2
16.Delta renovation	3

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, and dresser in each bedroom; a couch, easy chair, coffee table, end table, in the living rooms; and a formal dinette set in the dining room. The soft goods consist of drapes on the windows, TV, mattress and box springs and bed coverings. All of them are in good condition.
- Recommendation: Replace all the hard and soft goods in guest rooms.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation consists of a concrete basement walls and concrete perimeter foundation wall and piers supporting l-beams over the crawl space. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: Except for the garage, there is no slab on grade.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a wood joist system supported by concrete perimeter wall and concrete piers. The second floor is a wood joist system in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The steeply pitched roof is a wood truss with wood 1x decking. The roof is supported by a CMU/brick wall structure. The superstructure is in good condition.
- Recommendation: Replace the gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are brick veneer in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**

- Analysis: The windows are wood, double-glazed sliders in fair condition.
- Recommendation: Replace the windows.

#### **Exterior Doors**

- Analysis: The doors are solid core wood and are in fair condition.

- Recommendation: Replace the exterior doors.

## **Roofing**

### **Roof Coverings**

- Analysis: The roof covering is a clay or concrete tile in good condition. The metal gutters are in fair condition.
- Recommendation: No corrective action required.

## **Interior Construction**

### **Partitions**

- Analysis: The interior partitions are plaster on wood studs or plaster on masonry walls. The partition walls are in good condition.
- Recommendation: No corrective action required.

### **Interior Doors**

- Analysis: The doors are solid core wood in wood frames that are in good condition.
- Recommendation: Replace the interior doors.

## **Stairs**

### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has a ceramic tile wainscot in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms. Install full height ceramic tile in the bathrooms.

### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall in good condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: This unit has three bathrooms. Each contains a flush-valve toilet, a tub/shower combination, and a wall-mounted porcelain lavatory. All fixtures are in good condition.
- Recommendation: Replace the plumbing fixtures if plumbing is replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains a gas hot water heater in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas hot water heater. Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: The mechanical system consists of two split-systems using heat pumps in fair condition.
- Recommendation: Replace the split system HVAC.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: The electrical service is through a main panel of unknown size. It is in fair condition. The electrical service is original and is in fair condition. The lighting uses incandescent fixtures in good condition. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

#### **Communications and Security**

- Analysis: The fire annunciation system consists of battery-powered smoke detectors located throughout the building. It is in poor condition.
- Recommendation: Replace fire annunciator system.

### **Equipment**

#### **Other Equipment**

- Analysis: The building contain a kitchen that includes base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace the kitchen cabinets.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

### **Site Improvements**

#### **Parking Lots**

- Analysis: The asphalt driveway and the concrete sidewalk are in fair condition.
- Recommendation: Replace the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in fair condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.80%</b>	<b>\$1,300.59</b>
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>06 Wood &amp; Plastics</b>	<b>3.53%</b>	<b>\$5,708.54</b>
Base Cabinets: Beyond Useful Life		\$2,442.20
Upper cabinets: Beyond expected useful life		\$3,266.34
<b>07 Thermal &amp; Moisture Protection</b>	<b>0.01%</b>	<b>\$15.34</b>
Gutters: Damaged or Failing		\$15.34
<b>08 Doors &amp; Windows</b>	<b>19.99%</b>	<b>\$32,357.16</b>
Wood Door - Beyond Useful Life		\$18,110.40
Wood Framed windows: Damaged or failing		\$14,246.76
<b>09 Finishes</b>	<b>24.68%</b>	<b>\$39,943.13</b>
Carpet: Beyond Useful Life		\$4,440.27
Floor Tile: Damaged or Failing		\$7,923.46
Interior ceilings: Paint Failing		\$1,420.51
Interior walls: Paint failing		\$1,001.73
Vinyl Wall Covering: Beyond expected useful life		\$16,427.33
Wall Tile: Damaged or Failing		\$8,729.83
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$244.29</b>
BR Accessories: Replace due to remodel		\$244.29
<b>13 Special Construction</b>	<b>7.67%</b>	<b>\$12,416.03</b>
Fire Alarm System: Missing or Inadequate		\$2,193.77
Fire Sprinklers: Missing or Inadequate		\$10,222.26
<b>15 Mechanical</b>	<b>24.74%</b>	<b>\$40,046.59</b>
Domestic water system: Beyond expected useful life		\$5,958.27
Sewage System: Beyond expected useful life		\$2,858.25
Sink & vanity: Replace due to remodel		\$2,434.01
Sink, janitorial: Beyond expected useful life		\$1,082.56
Sink, kitchen: Beyond expected useful life		\$2,543.10
Split System: Beyond expected useful life		\$13,776.00
Tub: Beyond expected useful life		\$4,991.81
Water closet: Beyond expected useful life		\$3,121.34
Water heater: Beyond expected useful life		\$3,281.25
<b>16 Electrical</b>	<b>15.33%</b>	<b>\$24,817.46</b>
Branch Circuits: Beyond Expected Useful Life		\$8,095.50
Fixture: Incandescent fixture beyond expected life		\$10,711.76
Inadequate exterior Lighting		\$3,517.50
Main service: Beyond expected useful life		\$2,492.70
<b>19 FF&amp;E</b>	<b>3.09%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$161,849.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$890.17
Force Protection	9.00%	\$16,103.17
General Conditions	10.00%	\$16,184.90
<b>Total Additional Hard Cost</b>		<b>\$33,178.24</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$19,502.72
SIOH Conus	6.50%	\$13,944.45
Design	10.00%	\$19,502.72
08 MYr Inflation Fct	9.93%	\$24,624.13
<b>Total Soft Cost</b>		<b>\$77,574.02</b>
<b>Total Project</b>		<b>\$272,601.26</b>





## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.62%</b>	<b>\$12,758.16</b>
Parking Lots		\$3,990.00
Site Earthwork		\$8,768.16
<b>03 Concrete</b>	<b>15.79%</b>	<b>\$55,634.34</b>
Floor Construction		\$28,612.59
Slab on Grade		\$6,436.50
Stair Construction		\$7,717.50
Standard Foundations		\$12,867.75
<b>04 Masonry</b>	<b>11.80%</b>	<b>\$41,568.99</b>
Exterior Walls		\$41,568.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.72%</b>	<b>\$23,685.43</b>
Roof Construction		\$7,162.53
Roof Coverings		\$16,522.89
<b>08 Doors &amp; Windows</b>	<b>15.30%</b>	<b>\$53,914.35</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$33,600.00
Interior Doors		\$9,998.10
<b>09 Finishes</b>	<b>12.46%</b>	<b>\$43,911.00</b>
Ceiling Finishes		\$7,150.91
Floor Finishes		\$14,659.00
Partitions		\$12,022.10
Wall Finishes		\$10,078.99
<b>11 Equipment</b>	<b>4.17%</b>	<b>\$14,700.00</b>
Other Equipment		\$14,700.00
<b>13 Special Construction</b>	<b>4.40%</b>	<b>\$15,492.77</b>
Communications & Security		\$6,974.32
Sprinklers		\$8,518.45
<b>15 Mechanical</b>	<b>12.01%</b>	<b>\$42,323.40</b>
Cooling Generating Systems		\$20,588.40
Domestic Water Dist		\$9,450.00
Plumbing Fixtures		\$12,285.00
<b>16 Electrical</b>	<b>8.05%</b>	<b>\$28,348.43</b>
Electrical Service & Distribution		\$26,043.68
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.68%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$352,336.86</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,937.85
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$35,233.69
<b>Total Additional Hard Cost</b>		<b>\$37,171.54</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$19,475.42
SIOH Conus	6.50%	\$26,583.95
Design	10.00%	\$38,950.84
08 MYr Inflation Fct	9.93%	\$47,119.70
<b>Total Soft Cost</b>		<b>\$132,129.91</b>
<b>Total Project Cost for Replacement</b>		<b>\$521,638.31</b>

**INSERT BUILDING 1120 FLOOR PLANS HERE**



Front view 2441.

## Building 2441

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Building 2441 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2441 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	11
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most are in good condition.
- Recommendation: Replace all of the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: Replace the gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required. If the building were to be remodeled, the windows could be retrofitted to the ATEP standards.

### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof is sloped asphalt shingled roof on wood deck. The gutters are exterior to the roof with the downspouts exposed. Shingles and gutters are in fair condition.
- Recommendation: Replace the asphalt shingles.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is solid core wood doors in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in the living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet and regrout the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in good condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All of the fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire annunciator system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.
- Recommendation: No corrective action required.



## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace the kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition.
- Recommendation: Replace the parking lot and settled sections of the sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.00%</b>	<b>\$31,895.91</b>
Parking: AC Pavement Damaged or Failing		\$30,595.32
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>06 Wood &amp; Plastics</b>	<b>5.63%</b>	<b>\$35,889.26</b>
Base Cabinets: Beyond Useful Life		\$12,558.26
Upper cabinets: Beyond expected useful life		\$23,331.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.94%</b>	<b>\$37,860.48</b>
Asphalt Shingle Roof: Beyond Useful Life		\$32,494.98
Gutters: Damaged or Failing		\$5,365.50
<b>08 Doors &amp; Windows</b>	<b>0.37%</b>	<b>\$2,355.98</b>
Exterior Steel Door - Beyond expected useful life		\$2,355.98
<b>09 Finishes</b>	<b>14.30%</b>	<b>\$91,164.13</b>
Carpet: Beyond Useful Life		\$15,071.52
Exterior Wood Stain Finish: Failing		\$3,424.51
Floor Tile: Damaged or Failing		\$10,329.39
Interior ceilings: Paint Failing		\$4,911.39
Interior walls: Paint failing		\$4,279.51
Vinyl Wall Covering: Beyond expected useful life		\$44,661.79
Wall Tile: Damaged or Failing		\$8,486.02
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$977.13</b>
BR Accessories: Replace due to remodel		\$977.13
<b>11 Equipment</b>	<b>1.58%</b>	<b>\$10,092.60</b>
Stove: Missing or inadequate		\$10,092.60
<b>13 Special Construction</b>	<b>7.68%</b>	<b>\$48,929.52</b>
Fire Alarm System: Beyond Useful Life		\$8,642.08
Fire Sprinklers: Missing or Inadequate		\$40,287.44
<b>15 Mechanical</b>	<b>31.59%</b>	<b>\$201,346.38</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$23,467.80
Hydronic heating system: Beyond expt useful life		\$8,432.55
Pipe, sewer or waste: Beyond expected useful life		\$11,260.79
PTAC: Missing or inadequate		\$53,750.34
Restroom exhaust: Beyond expected useful life		\$18,066.30
Shower: Beyond expected useful life		\$27,008.10
Sink & vanity: Replace due to remodel		\$10,547.36
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$30,517.20
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$13,525.79
<b>16 Electrical</b>	<b>18.33%</b>	<b>\$116,853.36</b>
Branch Circuits: Beyond Expected Useful Life		\$31,899.09

Fixture: Incandescent fixture beyond expected life		\$42,192.39
Fixtures, fluorescent: Beyond expected useful life		\$4,681.53
Inadequate exterior Lighting		\$3,517.50
Main service: Beyond expected useful life		\$18,285.75
Overhead service: Inadequate clearance		\$4,055.10
Pole mounted fixture: Beyond expected useful life		\$12,222.00
<b>19 FF&amp;E</b>	<b>9.41%</b>	<b>\$60,000.00</b>
Hard and soft goods: Beyond expected useful life		\$60,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$637,365.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,505.51
Force Protection	9.00%	\$63,414.63
General Conditions	10.00%	\$63,736.50
<b>Total Additional Hard Cost</b>		<b>\$130,656.64</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$76,802.16
SIOH Conus	6.50%	\$54,913.55
Design	10.00%	\$76,802.16
08 MYr Inflation Fct	9.93%	\$96,970.37
<b>Total Soft Cost</b>		<b>\$305,488.25</b>
<b>Total Project</b>		<b>\$1,073,509.89</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.74%</b>	<b>\$51,191.57</b>
Parking Lots		\$14,364.00
Site Earthwork		\$36,827.57
<b>03 Concrete</b>	<b>15.40%</b>	<b>\$210,749.40</b>
Floor Construction		\$121,373.40
Slab on Grade		\$27,221.25
Stair Construction		\$7,717.50
Standard Foundations		\$54,437.25
<b>04 Masonry</b>	<b>6.24%</b>	<b>\$85,354.99</b>
Exterior Walls		\$85,354.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.25%</b>	<b>\$99,129.50</b>
Roof Construction		\$31,708.32
Roof Coverings		\$67,421.18
<b>08 Doors &amp; Windows</b>	<b>8.71%</b>	<b>\$119,094.15</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$24,777.90
<b>09 Finishes</b>	<b>13.90%</b>	<b>\$190,140.42</b>
Ceiling Finishes		\$29,360.77
Floor Finishes		\$57,446.53
Partitions		\$55,982.40
Wall Finishes		\$47,350.72
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.30%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$65,542.45</b>
Communications & Security		\$29,504.99
Sprinklers		\$36,037.46
<b>15 Mechanical</b>	<b>22.48%</b>	<b>\$307,494.60</b>
Cooling Generating Systems		\$87,099.60
Domestic Water Dist		\$41,580.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.24%</b>	<b>\$99,016.58</b>
Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>

**INSERT BUILDING 2441 FLOOR PLANS HERE**



Front Exterior of Bldg #2443.

## Building 2443

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Building 2443 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2443 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	11
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	12
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most of them are in good condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: Replace the gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required but if the building were to be remodeled, the windows could be retrofitted to the ATFP standards.



### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: There is a sloped asphalt shingled roof on wood deck. The shingles and gutters are in fair condition.
- Recommendation: Replace the asphalt shingles.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is solid core wood doors in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in good condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All of the fixtures are in good condition. Plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace kitchen cabinets

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.00%</b>	<b>\$31,895.91</b>
Parking: AC Pavement Damaged or Failing		\$30,595.32
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>06 Wood &amp; Plastics</b>	<b>5.63%</b>	<b>\$35,889.26</b>
Base Cabinets: Beyond Useful Life		\$12,558.26
Upper cabinets: Beyond expected useful life		\$23,331.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.94%</b>	<b>\$37,860.48</b>
Asphalt Shingle Roof: Beyond Useful Life		\$32,494.98
Gutters: Damaged or Failing		\$5,365.50
<b>08 Doors &amp; Windows</b>	<b>0.37%</b>	<b>\$2,355.98</b>
Exterior Steel Door - Beyond expected useful life		\$2,355.98
<b>09 Finishes</b>	<b>14.30%</b>	<b>\$91,164.13</b>
Carpet: Beyond Useful Life		\$15,071.52
Exterior Wood Stain Finish: Failing		\$3,424.51
Floor Tile: Damaged or Failing		\$10,329.39
Interior ceilings: Paint Failing		\$4,911.39
Interior walls: Paint failing		\$4,279.51
Vinyl Wall Covering: Beyond expected useful life		\$44,661.79
Wall Tile: Damaged or Failing		\$8,486.02
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$977.13</b>
BR Accessories: Replace due to remodel		\$977.13
<b>11 Equipment</b>	<b>1.58%</b>	<b>\$10,092.60</b>
Stove: Missing or inadequate		\$10,092.60
<b>13 Special Construction</b>	<b>7.68%</b>	<b>\$48,929.52</b>
Fire Alarm System: Beyond Useful Life		\$8,642.08
Fire Sprinklers: Missing or Inadequate		\$40,287.44
<b>15 Mechanical</b>	<b>31.59%</b>	<b>\$201,346.38</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$23,467.80
Hydronic heating system: Beyond expt useful life		\$8,432.55
Pipe, sewer or waste: Beyond expected useful life		\$11,260.79
PTAC: Missing or inadequate		\$53,750.34
Restroom exhaust: Beyond expected useful life		\$18,066.30
Shower: Beyond expected useful life		\$27,008.10
Sink & vanity: Replace due to remodel		\$10,547.36
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$30,517.20
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$13,525.79
<b>16 Electrical</b>	<b>18.33%</b>	<b>\$116,853.36</b>
Branch Circuits: Beyond Expected Useful Life		\$31,899.09

Fixture: Incandescent fixture beyond expected life		\$42,192.39
Fixtures, fluorescent: Beyond expected useful life		\$4,681.53
Inadequate exterior Lighting		\$3,517.50
Main service: Beyond expected useful life		\$18,285.75
Overhead service: Inadequate clearance		\$4,055.10
Pole mounted fixture: Beyond expected useful life		\$12,222.00
<b>19 FF&amp;E</b>	<b>9.41%</b>	<b>\$60,000.00</b>
Hard and soft goods: Beyond expected useful life		\$60,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$637,365.00</b>

#### **Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,505.51
Force Protection	9.00%	\$63,414.63
General Conditions	10.00%	\$63,736.50
<b>Total Additional Hard Cost</b>		<b>\$130,656.64</b>

#### **Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$76,802.16
SIOH Conus	6.50%	\$54,913.55
Design	10.00%	\$76,802.16
08 MYr Inflation Fct	9.93%	\$96,970.37
<b>Total Soft Cost</b>		<b>\$305,488.25</b>
<b>Total Project</b>		<b>\$1,073,509.89</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.74%</b>	<b>\$51,191.57</b>
Parking Lots		\$14,364.00
Site Earthwork		\$36,827.57
<b>03 Concrete</b>	<b>15.40%</b>	<b>\$210,749.40</b>
Floor Construction		\$121,373.40
Slab on Grade		\$27,221.25
Stair Construction		\$7,717.50
Standard Foundations		\$54,437.25
<b>04 Masonry</b>	<b>6.24%</b>	<b>\$85,354.99</b>
Exterior Walls		\$85,354.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.25%</b>	<b>\$99,129.50</b>
Roof Construction		\$31,708.32
Roof Coverings		\$67,421.18
<b>08 Doors &amp; Windows</b>	<b>8.71%</b>	<b>\$119,094.15</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$24,777.90
<b>09 Finishes</b>	<b>13.90%</b>	<b>\$190,140.42</b>
Ceiling Finishes		\$29,360.77
Floor Finishes		\$57,446.53
Partitions		\$55,982.40
Wall Finishes		\$47,350.72
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.30%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$65,542.45</b>
Communications & Security		\$29,504.99
Sprinklers		\$36,037.46
<b>15 Mechanical</b>	<b>22.48%</b>	<b>\$307,494.60</b>
Cooling Generating Systems		\$87,099.60
Domestic Water Dist		\$41,580.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.24%</b>	<b>\$99,016.58</b>
Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>

**INSERT BUILDING 2443 FLOOR PLANS HERE**





Similar to #2441.

## Building 2444

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Building 2444 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2444 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	12
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most of them are in good condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: Replace the gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required. If the building were to be remodeled, the windows could be retrofitted to the ATFP standards.

### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The building has a sloped asphalt shingled roof on wood deck. Gutters are exterior to the roof with the downspouts exposed. The shingles are in fair condition.
- Recommendation: Replace the asphalt shingles.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is solid core wood doors in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in good condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All of the fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

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Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00



General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>

**INSERT BUILDING 2444 FLOOR PLANS HERE**



Similar to #2443.

## Building 2445

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Building 2445 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2445 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	12
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most of them are in good condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required. If the building were to be remodeled, the windows could be retrofitted to the ATEP standards.

### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: There is a sloped asphalt shingled roof on wood deck. The gutters are exterior to the roof with the downspouts exposed. The shingles and gutters are in fair condition.
- Recommendation: Replace the asphalt shingles. Replace the gutters and downspouts

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is solid core wood doors in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in good condition.

- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.

- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in fair condition.
- Recommendation: Landscape the site to improve drainage.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.



## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.00%</b>	<b>\$31,895.91</b>
Parking: AC Pavement Damaged or Failing		\$30,595.32
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>06 Wood &amp; Plastics</b>	<b>5.63%</b>	<b>\$35,889.26</b>
Base Cabinets: Beyond Useful Life		\$12,558.26
Upper cabinets: Beyond expected useful life		\$23,331.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.94%</b>	<b>\$37,860.48</b>
Asphalt Shingle Roof: Beyond Useful Life		\$32,494.98
Gutters: Damaged or Failing		\$5,365.50
<b>08 Doors &amp; Windows</b>	<b>0.37%</b>	<b>\$2,355.98</b>
Exterior Steel Door - Beyond expected useful life		\$2,355.98
<b>09 Finishes</b>	<b>14.30%</b>	<b>\$91,164.13</b>
Carpet: Beyond Useful Life		\$15,071.52
Exterior Wood Stain Finish: Failing		\$3,424.51
Floor Tile: Damaged or Failing		\$10,329.39
Interior ceilings: Paint Failing		\$4,911.39
Interior walls: Paint failing		\$4,279.51
Vinyl Wall Covering: Beyond expected useful life		\$44,661.79
Wall Tile: Damaged or Failing		\$8,486.02
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$977.13</b>
BR Accessories: Replace due to remodel		\$977.13
<b>11 Equipment</b>	<b>1.58%</b>	<b>\$10,092.60</b>
Stove: Missing or inadequate		\$10,092.60
<b>13 Special Construction</b>	<b>7.68%</b>	<b>\$48,929.52</b>
Fire Alarm System: Beyond Useful Life		\$8,642.08
Fire Sprinklers: Missing or Inadequate		\$40,287.44
<b>15 Mechanical</b>	<b>31.59%</b>	<b>\$201,346.38</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$23,467.80
Hydronic heating system: Beyond expt useful life		\$8,432.55
Pipe, sewer or waste: Beyond expected useful life		\$11,260.79
PTAC: Missing or inadequate		\$53,750.34
Restroom exhaust: Beyond expected useful life		\$18,066.30
Shower: Beyond expected useful life		\$27,008.10
Sink & vanity: Replace due to remodel		\$10,547.36
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$30,517.20
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$13,525.79
<b>16 Electrical</b>	<b>18.33%</b>	<b>\$116,853.36</b>
Branch Circuits: Beyond Expected Useful Life		\$31,899.09

Fixture: Incandescent fixture beyond expected life		\$42,192.39
Fixtures, fluorescent: Beyond expected useful life		\$4,681.53
Inadequate exterior Lighting		\$3,517.50
Main service: Beyond expected useful life		\$18,285.75
Overhead service: Inadequate clearance		\$4,055.10
Pole mounted fixture: Beyond expected useful life		\$12,222.00
<b>19 FF&amp;E</b>	<b>9.41%</b>	<b>\$60,000.00</b>
Hard and soft goods: Beyond expected useful life		\$60,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$637,365.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,505.51
Force Protection	9.00%	\$63,414.63
General Conditions	10.00%	\$63,736.50
<b>Total Additional Hard Cost</b>		<b>\$130,656.64</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$76,802.16
SIOH Conus	6.50%	\$54,913.55
Design	10.00%	\$76,802.16
08 MYr Inflation Fct	9.93%	\$96,970.37
<b>Total Soft Cost</b>		<b>\$305,488.25</b>
<b>Total Project</b>		<b>\$1,073,509.89</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.74%</b>	<b>\$51,191.57</b>
Parking Lots		\$14,364.00
Site Earthwork		\$36,827.57
<b>03 Concrete</b>	<b>15.40%</b>	<b>\$210,749.40</b>
Floor Construction		\$121,373.40
Slab on Grade		\$27,221.25
Stair Construction		\$7,717.50
Standard Foundations		\$54,437.25
<b>04 Masonry</b>	<b>6.24%</b>	<b>\$85,354.99</b>
Exterior Walls		\$85,354.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.25%</b>	<b>\$99,129.50</b>
Roof Construction		\$31,708.32
Roof Coverings		\$67,421.18
<b>08 Doors &amp; Windows</b>	<b>8.71%</b>	<b>\$119,094.15</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$24,777.90
<b>09 Finishes</b>	<b>13.90%</b>	<b>\$190,140.42</b>
Ceiling Finishes		\$29,360.77
Floor Finishes		\$57,446.53
Partitions		\$55,982.40
Wall Finishes		\$47,350.72
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.30%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$65,542.45</b>
Communications & Security		\$29,504.99
Sprinklers		\$36,037.46
<b>15 Mechanical</b>	<b>22.48%</b>	<b>\$307,494.60</b>
Cooling Generating Systems		\$87,099.60
Domestic Water Dist		\$41,580.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.24%</b>	<b>\$99,016.58</b>
Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>

**INSERT BUILDING 2445 FLOOR PLANS HERE**



Similar to #2443.

## Building 2446

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Building 2446 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2446 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	12
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most of them are in good condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: Replace the gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required. If the building were to be remodeled, the windows could be retrofitted to the ATEP standards.

### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The building has a sloped asphalt shingled roof on wood deck. The gutters are exterior to the roof with the downspouts exposed. The shingles are in fair condition.
- Recommendation: Replace the asphalt shingles.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is a solid core wood door in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in good condition.
- Recommendation: Paint the ceilings.



## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All of the fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: Landscape the site to correct drainage problems.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.00%</b>	<b>\$31,895.91</b>
Parking: AC Pavement Damaged or Failing		\$30,595.32
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>06 Wood &amp; Plastics</b>	<b>5.63%</b>	<b>\$35,889.26</b>
Base Cabinets: Beyond Useful Life		\$12,558.26
Upper cabinets: Beyond expected useful life		\$23,331.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.94%</b>	<b>\$37,860.48</b>
Asphalt Shingle Roof: Beyond Useful Life		\$32,494.98
Gutters: Damaged or Failing		\$5,365.50
<b>08 Doors &amp; Windows</b>	<b>0.37%</b>	<b>\$2,355.98</b>
Exterior Steel Door - Beyond expected useful life		\$2,355.98
<b>09 Finishes</b>	<b>14.30%</b>	<b>\$91,164.13</b>
Carpet: Beyond Useful Life		\$15,071.52
Exterior Wood Stain Finish: Failing		\$3,424.51
Floor Tile: Damaged or Failing		\$10,329.39
Interior ceilings: Paint Failing		\$4,911.39
Interior walls: Paint failing		\$4,279.51
Vinyl Wall Covering: Beyond expected useful life		\$44,661.79
Wall Tile: Damaged or Failing		\$8,486.02
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$977.13</b>
BR Accessories: Replace due to remodel		\$977.13
<b>11 Equipment</b>	<b>1.58%</b>	<b>\$10,092.60</b>
Stove: Missing or inadequate		\$10,092.60
<b>13 Special Construction</b>	<b>7.68%</b>	<b>\$48,929.52</b>
Fire Alarm System: Beyond Useful Life		\$8,642.08
Fire Sprinklers: Missing or Inadequate		\$40,287.44
<b>15 Mechanical</b>	<b>31.59%</b>	<b>\$201,346.38</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$23,467.80
Hydronic heating system: Beyond expt useful life		\$8,432.55
Pipe, sewer or waste: Beyond expected useful life		\$11,260.79
PTAC: Missing or inadequate		\$53,750.34
Restroom exhaust: Beyond expected useful life		\$18,066.30
Shower: Beyond expected useful life		\$27,008.10
Sink & vanity: Replace due to remodel		\$10,547.36
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$30,517.20
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$13,525.79
<b>16 Electrical</b>	<b>18.33%</b>	<b>\$116,853.36</b>
Branch Circuits: Beyond Expected Useful Life		\$31,899.09

Fixture: Incandescent fixture beyond expected life		\$42,192.39
Fixtures, fluorescent: Beyond expected useful life		\$4,681.53
Inadequate exterior Lighting		\$3,517.50
Main service: Beyond expected useful life		\$18,285.75
Overhead service: Inadequate clearance		\$4,055.10
Pole mounted fixture: Beyond expected useful life		\$12,222.00
<b>19 FF&amp;E</b>	<b>9.41%</b>	<b>\$60,000.00</b>
Hard and soft goods: Beyond expected useful life		\$60,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$637,365.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,505.51
Force Protection	9.00%	\$63,414.63
General Conditions	10.00%	\$63,736.50
<b>Total Additional Hard Cost</b>		<b>\$130,656.64</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$76,802.16
SIOH Conus	6.50%	\$54,913.55
Design	10.00%	\$76,802.16
08 MYr Inflation Fct	9.93%	\$96,970.37
<b>Total Soft Cost</b>		<b>\$305,488.25</b>
<b>Total Project</b>		<b>\$1,073,509.89</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.74%</b>	<b>\$51,191.57</b>
Parking Lots		\$14,364.00
Site Earthwork		\$36,827.57
<b>03 Concrete</b>	<b>15.40%</b>	<b>\$210,749.40</b>
Floor Construction		\$121,373.40
Slab on Grade		\$27,221.25
Stair Construction		\$7,717.50
Standard Foundations		\$54,437.25
<b>04 Masonry</b>	<b>6.24%</b>	<b>\$85,354.99</b>
Exterior Walls		\$85,354.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.25%</b>	<b>\$99,129.50</b>
Roof Construction		\$31,708.32
Roof Coverings		\$67,421.18
<b>08 Doors &amp; Windows</b>	<b>8.71%</b>	<b>\$119,094.15</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$24,777.90
<b>09 Finishes</b>	<b>13.90%</b>	<b>\$190,140.42</b>
Ceiling Finishes		\$29,360.77
Floor Finishes		\$57,446.53
Partitions		\$55,982.40
Wall Finishes		\$47,350.72
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.30%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$65,542.45</b>
Communications & Security		\$29,504.99
Sprinklers		\$36,037.46
<b>15 Mechanical</b>	<b>22.48%</b>	<b>\$307,494.60</b>
Cooling Generating Systems		\$87,099.60
Domestic Water Dist		\$41,580.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.24%</b>	<b>\$99,016.58</b>
Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>

**INSERT BUILDING 2446 FLOOR PLANS HERE**



Similar to #2443.

## Building 2447

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Building 2447 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2447 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	12
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4



## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most of them are in good condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: Replace the gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required. If the building were to be remodeled, the windows could be retrofitted to the ATEP standards.

### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The building has a sloped asphalt shingled roof on wood deck. The gutters are exterior to the roof with the downspouts exposed. Shingles and gutters are in fair condition.
- Recommendation: Replace the asphalt shingles.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is a solid core wood door in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in good condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All of the fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: Landscape the site to prevent drainage problems.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.00%</b>	<b>\$31,895.91</b>
Parking: AC Pavement Damaged or Failing		\$30,595.32
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>06 Wood &amp; Plastics</b>	<b>5.63%</b>	<b>\$35,889.26</b>
Base Cabinets: Beyond Useful Life		\$12,558.26
Upper cabinets: Beyond expected useful life		\$23,331.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.94%</b>	<b>\$37,860.48</b>
Asphalt Shingle Roof: Beyond Useful Life		\$32,494.98
Gutters: Damaged or Failing		\$5,365.50
<b>08 Doors &amp; Windows</b>	<b>0.37%</b>	<b>\$2,355.98</b>
Exterior Steel Door - Beyond expected useful life		\$2,355.98
<b>09 Finishes</b>	<b>14.30%</b>	<b>\$91,164.13</b>
Carpet: Beyond Useful Life		\$15,071.52
Exterior Wood Stain Finish: Failing		\$3,424.51
Floor Tile: Damaged or Failing		\$10,329.39
Interior ceilings: Paint Failing		\$4,911.39
Interior walls: Paint failing		\$4,279.51
Vinyl Wall Covering: Beyond expected useful life		\$44,661.79
Wall Tile: Damaged or Failing		\$8,486.02
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$977.13</b>
BR Accessories: Replace due to remodel		\$977.13
<b>11 Equipment</b>	<b>1.58%</b>	<b>\$10,092.60</b>
Stove: Missing or inadequate		\$10,092.60
<b>13 Special Construction</b>	<b>7.68%</b>	<b>\$48,929.52</b>
Fire Alarm System: Beyond Useful Life		\$8,642.08
Fire Sprinklers: Missing or Inadequate		\$40,287.44
<b>15 Mechanical</b>	<b>31.59%</b>	<b>\$201,346.38</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$23,467.80
Hydronic heating system: Beyond expt useful life		\$8,432.55
Pipe, sewer or waste: Beyond expected useful life		\$11,260.79
PTAC: Missing or inadequate		\$53,750.34
Restroom exhaust: Beyond expected useful life		\$18,066.30
Shower: Beyond expected useful life		\$27,008.10
Sink & vanity: Replace due to remodel		\$10,547.36
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$30,517.20
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$13,525.79
<b>16 Electrical</b>	<b>18.33%</b>	<b>\$116,853.36</b>
Branch Circuits: Beyond Expected Useful Life		\$31,899.09

Fixture: Incandescent fixture beyond expected life		\$42,192.39
Fixtures, fluorescent: Beyond expected useful life		\$4,681.53
Inadequate exterior Lighting		\$3,517.50
Main service: Beyond expected useful life		\$18,285.75
Overhead service: Inadequate clearance		\$4,055.10
Pole mounted fixture: Beyond expected useful life		\$12,222.00
<b>19 FF&amp;E</b>	<b>9.41%</b>	<b>\$60,000.00</b>
Hard and soft goods: Beyond expected useful life		\$60,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$637,365.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,505.51
Force Protection	9.00%	\$63,414.63
General Conditions	10.00%	\$63,736.50
<b>Total Additional Hard Cost</b>		<b>\$130,656.64</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$76,802.16
SIOH Conus	6.50%	\$54,913.55
Design	10.00%	\$76,802.16
08 MYr Inflation Fct	9.93%	\$96,970.37
<b>Total Soft Cost</b>		<b>\$305,488.25</b>
<b>Total Project</b>		<b>\$1,073,509.89</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.74%</b>	<b>\$51,191.57</b>
Parking Lots		\$14,364.00
Site Earthwork		\$36,827.57
<b>03 Concrete</b>	<b>15.40%</b>	<b>\$210,749.40</b>
Floor Construction		\$121,373.40
Slab on Grade		\$27,221.25
Stair Construction		\$7,717.50
Standard Foundations		\$54,437.25
<b>04 Masonry</b>	<b>6.24%</b>	<b>\$85,354.99</b>
Exterior Walls		\$85,354.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.25%</b>	<b>\$99,129.50</b>
Roof Construction		\$31,708.32
Roof Coverings		\$67,421.18
<b>08 Doors &amp; Windows</b>	<b>8.71%</b>	<b>\$119,094.15</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$24,777.90
<b>09 Finishes</b>	<b>13.90%</b>	<b>\$190,140.42</b>
Ceiling Finishes		\$29,360.77
Floor Finishes		\$57,446.53
Partitions		\$55,982.40
Wall Finishes		\$47,350.72
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.30%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$65,542.45</b>
Communications & Security		\$29,504.99
Sprinklers		\$36,037.46
<b>15 Mechanical</b>	<b>22.48%</b>	<b>\$307,494.60</b>
Cooling Generating Systems		\$87,099.60
Domestic Water Dist		\$41,580.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.24%</b>	<b>\$99,016.58</b>
Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>



**INSERT BUILDING 2447 FLOOR PLANS HERE**



Similar to #2443.

## Building 2448

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Building 2448 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2448 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	12
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most of them are in good condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required. If the building were to be remodeled, the windows could be retrofitted to the ATFP standards.

### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The building has a sloped asphalt shingled roof on wood deck. The gutters are exterior to the roof with the downspouts exposed. The shingles are in fair condition.
- Recommendation: Replace the asphalt shingles.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is a solid core wood door in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in good condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All of the fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace the kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: Landscape the site to prevent drainage problems.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.00%</b>	<b>\$31,895.91</b>
Parking: AC Pavement Damaged or Failing		\$30,595.32
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>06 Wood &amp; Plastics</b>	<b>5.63%</b>	<b>\$35,889.26</b>
Base Cabinets: Beyond Useful Life		\$12,558.26
Upper cabinets: Beyond expected useful life		\$23,331.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.94%</b>	<b>\$37,860.48</b>
Asphalt Shingle Roof: Beyond Useful Life		\$32,494.98
Gutters: Damaged or Failing		\$5,365.50
<b>08 Doors &amp; Windows</b>	<b>0.37%</b>	<b>\$2,355.98</b>
Exterior Steel Door - Beyond expected useful life		\$2,355.98
<b>09 Finishes</b>	<b>14.30%</b>	<b>\$91,164.13</b>
Carpet: Beyond Useful Life		\$15,071.52
Exterior Wood Stain Finish: Failing		\$3,424.51
Floor Tile: Damaged or Failing		\$10,329.39
Interior ceilings: Paint Failing		\$4,911.39
Interior walls: Paint failing		\$4,279.51
Vinyl Wall Covering: Beyond expected useful life		\$44,661.79
Wall Tile: Damaged or Failing		\$8,486.02
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$977.13</b>
BR Accessories: Replace due to remodel		\$977.13
<b>11 Equipment</b>	<b>1.58%</b>	<b>\$10,092.60</b>
Stove: Missing or inadequate		\$10,092.60
<b>13 Special Construction</b>	<b>7.68%</b>	<b>\$48,929.52</b>
Fire Alarm System: Beyond Useful Life		\$8,642.08
Fire Sprinklers: Missing or Inadequate		\$40,287.44
<b>15 Mechanical</b>	<b>31.59%</b>	<b>\$201,346.38</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$23,467.80
Hydronic heating system: Beyond expt useful life		\$8,432.55
Pipe, sewer or waste: Beyond expected useful life		\$11,260.79
PTAC: Missing or inadequate		\$53,750.34
Restroom exhaust: Beyond expected useful life		\$18,066.30
Shower: Beyond expected useful life		\$27,008.10
Sink & vanity: Replace due to remodel		\$10,547.36
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$30,517.20
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$13,525.79
<b>16 Electrical</b>	<b>18.33%</b>	<b>\$116,853.36</b>
Branch Circuits: Beyond Expected Useful Life		\$31,899.09

Fixture: Incandescent fixture beyond expected life		\$42,192.39
Fixtures, fluorescent: Beyond expected useful life		\$4,681.53
Inadequate exterior Lighting		\$3,517.50
Main service: Beyond expected useful life		\$18,285.75
Overhead service: Inadequate clearance		\$4,055.10
Pole mounted fixture: Beyond expected useful life		\$12,222.00
<b>19 FF&amp;E</b>	<b>9.41%</b>	<b>\$60,000.00</b>
Hard and soft goods: Beyond expected useful life		\$60,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$637,365.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,505.51
Force Protection	9.00%	\$63,414.63
General Conditions	10.00%	\$63,736.50
<b>Total Additional Hard Cost</b>		<b>\$130,656.64</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$76,802.16
SIOH Conus	6.50%	\$54,913.55
Design	10.00%	\$76,802.16
08 MYr Inflation Fct	9.93%	\$96,970.37
<b>Total Soft Cost</b>		<b>\$305,488.25</b>
<b>Total Project</b>		<b>\$1,073,509.89</b>



## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.74%</b>	<b>\$51,191.57</b>
Parking Lots		\$14,364.00
Site Earthwork		\$36,827.57
<b>03 Concrete</b>	<b>15.40%</b>	<b>\$210,749.40</b>
Floor Construction		\$121,373.40
Slab on Grade		\$27,221.25
Stair Construction		\$7,717.50
Standard Foundations		\$54,437.25
<b>04 Masonry</b>	<b>6.24%</b>	<b>\$85,354.99</b>
Exterior Walls		\$85,354.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.25%</b>	<b>\$99,129.50</b>
Roof Construction		\$31,708.32
Roof Coverings		\$67,421.18
<b>08 Doors &amp; Windows</b>	<b>8.71%</b>	<b>\$119,094.15</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$24,777.90
<b>09 Finishes</b>	<b>13.90%</b>	<b>\$190,140.42</b>
Ceiling Finishes		\$29,360.77
Floor Finishes		\$57,446.53
Partitions		\$55,982.40
Wall Finishes		\$47,350.72
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.30%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$65,542.45</b>
Communications & Security		\$29,504.99
Sprinklers		\$36,037.46
<b>15 Mechanical</b>	<b>22.48%</b>	<b>\$307,494.60</b>
Cooling Generating Systems		\$87,099.60
Domestic Water Dist		\$41,580.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.24%</b>	<b>\$99,016.58</b>
Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>

**INSERT BUILDING 2448 FLOOR PLANS HERE**



Similar to #2443.

## Building 2449

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Building 2449 was constructed in 1962. The 9,683 square foot facility contains 12 lodging rooms: 4 suite with full bathrooms and kitchens and 8 suite with multiple rooms, full bathrooms and kitchens. The building is functioning as 12 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 4 extended stay rooms and 12 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,073,510.00
Replacement Cost	\$2,025,480.00
Condition Assessment to Replacement Cost Ratio	53.00%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2449 is not recommended.

## Attributes

01.Number of Units Constructed	12
02.Number of Units Used	12
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	11
13.Renovated to Standard	0
14.Renovated to Extended Stay	4
15.Renovated to Family Suite	12
16.Delta renovation	4

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, desk/workstation with chair, entertainment armoire, couch, easy chair, and end table. The soft goods consist of mini-blinds, TV, mattress and box springs and bed coverings. Most of them are in good condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade. The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The structure is wood frame construction with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a wood plywood deck attached to sloped wooden rafters. The roof construction is in good condition.
- Recommendation: Replace the gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are wood siding in fair condition.
- Recommendation: Stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required. If the building were to be remodeled, the windows could be retrofitted to the ATEP standards.

### **Exterior Doors**

- Analysis: The vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal with glazing. It is in fair condition.
- Recommendation: Replace the laundry door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The building has a sloped asphalt shingled roof on wood deck. The gutters are exterior to the roof with the downspouts exposed. The shingles are in fair condition.
- Recommendation: Replace the asphalt shingles.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on wood studs in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The unit entry door is a solid core wood door in a metal frame and is in good condition. The other doors are solid core or sliding wood doors in good condition.
- Recommendation: No corrective action required.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The stairs are wood framed with wood handrails. There are three sets. There are no elevators in the structure. The stairs are in good condition.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. The bathroom has full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchen areas have ceramic tile. The floor finishes are in good condition.
- Recommendation: Replace the carpete. RegROUT the ceramic tile floors.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall in fair condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and an integrated solid-surface lavatory with countertop and wood vanity. All of the fixtures are in good condition. The plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures when the plumbing lines are replaced. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains one 70-gallon propane gas boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system is a two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. The hot water for heating is supplied by a hot water boiler located in the mechanical room that is in fair condition. The chiller is located to the rear of the building and is in good condition. The pumps with the chiller are in fair condition.
- Recommendation: Replace the existing mechanical system with a system of PTAC units in each living area and the common areas. Remove the boiler and chiller.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The electrical service is through a 120-208/240Y volt, 400 amp main panel. The electrical service is original and is in fair condition. The lighting uses incandescent and some fluorescent fixtures. The lighting is in good condition but the wiring is original. The outlets in the building are not in sufficient quantity.
- Recommendation: Replace the main service and branch circuits. Replace the lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Pull alarms and strobes are located in the vestibule.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchens and include base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: Replace kitchen cabinets.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.



## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

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Vinyl Wall Covering: Beyond expected useful life		\$44,661.79
Wall Tile: Damaged or Failing		\$8,486.02
<b>10 Specialties</b>	<b>0.15%</b>	<b>\$977.13</b>
BR Accessories: Replace due to remodel		\$977.13
<b>11 Equipment</b>	<b>1.58%</b>	<b>\$10,092.60</b>
Stove: Missing or inadequate		\$10,092.60
<b>13 Special Construction</b>	<b>7.68%</b>	<b>\$48,929.52</b>
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Fire Sprinklers: Missing or Inadequate		\$40,287.44
<b>15 Mechanical</b>	<b>31.59%</b>	<b>\$201,346.38</b>
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Overhead service: Inadequate clearance		\$4,055.10
Pole mounted fixture: Beyond expected useful life		\$12,222.00
<b>19 FF&amp;E</b>	<b>9.41%</b>	<b>\$60,000.00</b>
Hard and soft goods: Beyond expected useful life		\$60,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$637,365.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,505.51
Force Protection	9.00%	\$63,414.63
General Conditions	10.00%	\$63,736.50
<b>Total Additional Hard Cost</b>		<b>\$130,656.64</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$76,802.16
SIOH Conus	6.50%	\$54,913.55
Design	10.00%	\$76,802.16
08 MYr Inflation Fct	9.93%	\$96,970.37
<b>Total Soft Cost</b>		<b>\$305,488.25</b>
<b>Total Project</b>		<b>\$1,073,509.89</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.74%</b>	<b>\$51,191.57</b>
Parking Lots		\$14,364.00
Site Earthwork		\$36,827.57
<b>03 Concrete</b>	<b>15.40%</b>	<b>\$210,749.40</b>
Floor Construction		\$121,373.40
Slab on Grade		\$27,221.25
Stair Construction		\$7,717.50
Standard Foundations		\$54,437.25
<b>04 Masonry</b>	<b>6.24%</b>	<b>\$85,354.99</b>
Exterior Walls		\$85,354.99
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.25%</b>	<b>\$99,129.50</b>
Roof Construction		\$31,708.32
Roof Coverings		\$67,421.18
<b>08 Doors &amp; Windows</b>	<b>8.71%</b>	<b>\$119,094.15</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$24,777.90
<b>09 Finishes</b>	<b>13.90%</b>	<b>\$190,140.42</b>
Ceiling Finishes		\$29,360.77
Floor Finishes		\$57,446.53
Partitions		\$55,982.40
Wall Finishes		\$47,350.72
<b>10 Specialties</b>	<b>0.12%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.30%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$65,542.45</b>
Communications & Security		\$29,504.99
Sprinklers		\$36,037.46
<b>15 Mechanical</b>	<b>22.48%</b>	<b>\$307,494.60</b>
Cooling Generating Systems		\$87,099.60
Domestic Water Dist		\$41,580.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.24%</b>	<b>\$99,016.58</b>
Electrical Service & Distribution		\$96,711.83
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.85%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,368,097.05</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,524.53
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$136,809.70
<b>Total Additional Hard Cost</b>		<b>\$144,334.24</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$75,621.56
SIOH Conus	6.50%	\$103,223.44
Design	10.00%	\$151,243.13
08 MYr Inflation Fct	9.93%	\$182,962.18
<b>Total Soft Cost</b>		<b>\$513,050.31</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,025,481.59</b>

**INSERT BUILDING 2449 FLOOR PLANS HERE**



Similar to #2606.

## Building 2602

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Building 2602 was constructed in 1974. The 11,647 square foot facility contains 26 single bedrooms with a full bathroom and a kitchenette. The building is functioning as 26 extended stay rooms.

### Significant Assumptions

The replacement and renovation cost models are based on 26 extended stay rooms.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,721,100.00
Replacement Cost	\$2,556,290.00
Condition Assessment to Replacement Cost Ratio	67.33%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2602 is not recommended.

## Attributes

01.Number of Units Constructed	26
02.Number of Units Used	26
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	26
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	26
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	26
15.Renovated to Family Suite	0
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, table with chairs, and desk with chair. The soft goods consist of curtains, TV, mattress and box springs and bed coverings. Most of them are in fair condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams in compacted soil. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second and third floors are precast concrete slabs. Precast load-bearing concrete walls support the floor slabs. All are in poor condition due to spalling.
- Recommendation: Repair the spalling.

#### **Roof Construction**

- Analysis: The roof structure is a precast concrete slab. Precast load-bearing concrete walls support the roof structure. The superstructure is poor due to heavy spalling and exposed, heavily corroded reinforcing bars at wall and slab connections.
- Recommendation: Repair the spalling.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are brick veneer in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**

- Analysis: This building does not contain windows in the living units.
- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: The living units have both a metal insulated door with keyless lockset and a metal sliding patio door. The patio door is in good condition but the metal door is in fair condition.

- Recommendation: Replace the metal door.

## **Roofing**

### **Roof Coverings**

- Analysis: The roof covering the building is a flat single-ply membrane roof in fair condition. The gutters are exterior to the roof with the downspouts exposed.
- Recommendation: Replace the roof.

## **Interior Construction**

### **Partitions**

- Analysis: The interior partitions are drywall on studs and drywall mounted onto load-bearing concrete walls. All of them are in good condition.
- Recommendation: No corrective action required.

### **Interior Doors**

- Analysis: The doors are solid core wood doors in metal frames and are in good condition. Closet doors and kitchenette walls are vinyl accordion type sliding partitions.
- Recommendation: Replace the bathroom doors. Replace closet and kitchenette accordion type sliding partitions with bi-fold doors.

### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

## **Stairs**

### **Stair Construction**

- Analysis: The exterior stairs are concrete. The stairs have heavy spalling and cracking and are in poor condition. Some areas of the balconies near the stairs are cracking and are in poor condition.
- Recommendation: Replace the concrete stairs. Repair the cracked balconies.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: The wall finishes are painted drywall/Duraplex finish. Duraplex is also used in the corridors. The wall finishes are in good condition.
- Recommendation: Install vinyl wall covering in living area/bedrooms and full height ceramic tile in the bathrooms.

### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchenette areas have vinyl composition tile. The floor finishes are in fair condition.
- Recommendation: Replace the carpet. Replace the vinyl composition tile with ceramic tile.

### **Ceiling Finishes**



- Analysis: The ceilings are painted drywall and concrete in fair condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and a porcelain lavatory with countertop and wood vanity. All of the fixtures are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

### **Domestic Water Distribution**

- Analysis: Access to the mechanical rooms was not available. The building contains one gas boiler with an accompanying hot water tank. The boiler system is in poor condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: PTAC units provide heating and cooling. These are in good condition. The bathroom and kitchenette exhaust systems are in good condition.
- Recommendation: No corrective action required.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Access to the electrical rooms was not available. The electrical service is believed to be through a 120/208Y volt, 1600 amp main panel located in the small electric room. The electrical service is original and is in fair condition. The lighting is incandescent in the units. The lighting is in good condition. Outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace the main service and branch circuits, and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat detectors located in each room. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are not readily visible outside of the living units.

- Recommendation: Replace the fire alarm system. Install exit signs and emergency lights.

## **Equipment**

### **Other Equipment**

- Analysis: The rooms contain kitchenettes and include base and wall cabinets, a small stove, a sink, a microwave, and compact refrigerator. There is no ventilation hood but there is an adjacent exhaust vent in the wall. The kitchenettes are in good condition.
- Recommendation: Replace the kitchenettes.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in fair condition. The concrete sidewalks around the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Resurface the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in good condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.70%</b>	<b>\$7,190.03</b>
Parking: AC Pavement Damaged or Failing		\$4,814.28
Walks: Concrete Walk Damaged or Failing		\$2,375.75
<b>03 Concrete</b>	<b>7.93%</b>	<b>\$81,070.53</b>
Concrete Walls: Damaged and Cracked		\$38,787.84
Concrete Stairs - Damaged or Failing		\$42,282.69
<b>05 Metals</b>	<b>1.61%</b>	<b>\$16,422.00</b>
Railings - Inadequate or Missing		\$16,422.00
<b>06 Wood &amp; Plastics</b>	<b>2.00%</b>	<b>\$20,420.40</b>
Wall Sheathing: Damaged or Failing		\$20,420.40
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.32%</b>	<b>\$33,926.22</b>
Gutters: Damaged or Failing		\$5,825.40
Roof Deck Insulation: Damaged or Failing		\$14,020.32
Single Ply Roof: Damaged or Failing		\$14,080.50
<b>08 Doors &amp; Windows</b>	<b>11.29%</b>	<b>\$115,410.46</b>
Exterior Steel Door - Beyond expected useful life		\$68,323.42
Wood Door - Beyond Useful Life		\$23,543.52
Wood Door - Damaged or Failing		\$23,543.52
<b>09 Finishes</b>	<b>15.51%</b>	<b>\$158,439.28</b>
Carpet: Beyond Useful Life		\$18,139.94
Covered Walkway Ceiling: Paint Failing		\$1,382.31
Floor Tile: Damaged or Failing		\$17,927.10
Interior ceilings: Paint Failing		\$5,037.78
Interior walls: Paint failing		\$2,460.65
Vinyl Wall Covering: Beyond expected useful life		\$62,444.87
Wall Tile: Damaged or Failing		\$51,046.63
<b>10 Specialties</b>	<b>0.21%</b>	<b>\$2,117.12</b>
BR Accessories: Replace due to remodel		\$2,117.12
<b>11 Equipment</b>	<b>9.35%</b>	<b>\$95,577.30</b>
Unit Kitchen: Beyond Useful Life		\$95,577.30
<b>13 Special Construction</b>	<b>5.76%</b>	<b>\$58,861.19</b>
Fire Alarm System: Beyond Useful Life		\$10,394.95
Fire Sprinklers: Missing or Inadequate		\$48,466.24
<b>15 Mechanical</b>	<b>14.66%</b>	<b>\$149,753.68</b>
Boiler: Damaged or failing		\$15,486.98
Domestic water system: Beyond expected useful life		\$28,229.87
Sewage System: Beyond expected useful life		\$13,545.68
Sink & vanity: Replace due to remodel		\$21,094.71
Sink, janitorial: Beyond expected useful life		\$1,082.56
Tub: Beyond expected useful life		\$43,262.31
Water closet: Beyond expected useful life		\$27,051.57

<b>16 Electrical</b>	<b>14.94%</b>	<b>\$152,664.16</b>
Bollard light: Beyond expected useful life		\$1,527.75
Branch Circuits: Beyond Expected Useful Life		\$38,368.78
Emergency light: Beyond expected useful life		\$2,535.82
Fixture: Incandescent fixture beyond expected life		\$50,753.09
Fixtures, fluorescent: Beyond expected useful life		\$13,524.42
Inadequate exterior Lighting		\$12,222.00
Main service: Beyond expected useful life		\$33,732.30
<b>19 FF&amp;E</b>	<b>12.72%</b>	<b>\$130,000.00</b>
Hard and soft goods: Beyond expected useful life		\$130,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,021,852.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$5,620.19
Force Protection	9.00%	\$101,669.16
General Conditions	10.00%	\$102,185.20
<b>Total Additional Hard Cost</b>		<b>\$209,474.55</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$123,132.66
SIOH Conus	6.50%	\$88,039.85
Design	10.00%	\$123,132.66
08 MYr Inflation Fct	9.93%	\$155,467.23
<b>Total Soft Cost</b>		<b>\$489,772.39</b>

<b>Total Project</b>		<b>\$1,721,098.94</b>
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## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.04%</b>	<b>\$52,479.26</b>
Parking Lots		\$23,142.00
Site Earthwork		\$29,337.26
<b>03 Concrete</b>	<b>17.73%</b>	<b>\$306,159.99</b>
Floor Construction		\$211,759.74
Slab on Grade		\$21,672.00
Stair Construction		\$7,717.50
Standard Foundations		\$65,010.75
<b>04 Masonry</b>	<b>5.69%</b>	<b>\$98,201.91</b>
Exterior Walls		\$98,201.91
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.18%</b>	<b>\$89,468.04</b>
Roof Construction		\$35,632.54
Roof Coverings		\$53,835.51
<b>08 Doors &amp; Windows</b>	<b>9.98%</b>	<b>\$172,327.05</b>
Exterior Doors		\$14,159.25
Exterior Windows		\$126,000.00
Interior Doors		\$32,167.80
<b>09 Finishes</b>	<b>12.79%</b>	<b>\$220,823.25</b>
Ceiling Finishes		\$33,995.90
Floor Finishes		\$83,850.92
Partitions		\$58,720.77
Wall Finishes		\$44,255.65
<b>10 Specialties</b>	<b>0.09%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>5.53%</b>	<b>\$95,550.00</b>
Other Equipment		\$95,550.00
<b>13 Special Construction</b>	<b>4.53%</b>	<b>\$78,272.94</b>
Communications & Security		\$35,235.83
Sprinklers		\$43,037.12
<b>15 Mechanical</b>	<b>21.01%</b>	<b>\$362,684.70</b>
Cooling Generating Systems		\$104,017.20
Domestic Water Dist		\$49,140.00
Plumbing Fixtures		\$209,527.50
<b>16 Electrical</b>	<b>6.90%</b>	<b>\$119,075.78</b>
Electrical Service & Distribution		\$116,771.03
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>7.53%</b>	<b>\$130,000.00</b>
Interior FF&E allowance		\$130,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,726,626.31</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,496.44
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$172,662.63
<b>Total Additional Hard Cost</b>		<b>\$182,159.08</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$95,439.27
SIOH Conus	6.50%	\$130,274.60
Design	10.00%	\$190,878.54
08 MYr Inflation Fct	9.93%	\$230,910.02
<b>Total Soft Cost</b>		<b>\$647,502.43</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,556,287.82</b>

**INSERT BUILDING 2602 FLOOR PLANS HERE**



## Building 2603

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Building 2603 was constructed in 1974. The 22,128 square foot facility contains 44 lodging units: 44 single bedrooms with full bathroom and kitchenette. The building is functioning as 44 extended stay rooms.

### Significant Assumptions

The replacement and renovation cost models are based on 44 extended stay rooms.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$2,887,400.00
Replacement Cost	\$3,999,595.00
Condition Assessment to Replacement Cost Ratio	72.19%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2603 is not recommended.

## Attributes

01.Number of Units Constructed	44
02.Number of Units Used	44
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	44
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	44
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	44
15.Renovated to Family Suite	0
16.Delta renovation	0



## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, table with chairs, and desk with chair. The soft goods consist of curtains, TV, mattress and box springs and bed coverings. Most of them are in fair condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams in compacted soil. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second and third floors are precast concrete slabs. Precast load-bearing concrete walls support the floor slabs. All of them are in poor condition due to spalling.
- Recommendation: Repair the spalling.

#### **Roof Construction**

- Analysis: The roof structure is a precast concrete slab. Precast load-bearing concrete walls support the roof structure. The superstructure is poor due to heavy spalling and exposed, heavily corroded reinforcing bars at wall and slab connections.
- Recommendation: Repair the spalling.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are part of the structural walls for the building. The outside part of the walls is an exposed aggregate finish in good condition. The living unit walls facing the balconies and walkways have vinyl-covered panels in poor condition. The other surfaces are bare concrete.
- Recommendation: Replace the vinyl panels.

#### **Exterior Windows**

- Analysis: This building does not contain windows in the living units.
- Recommendation: No corrective action required.

### **Exterior Doors**

- Analysis: The living units have both a metal insulated door with keyless lockset and a metal sliding patio door. The patio door is in good condition but the metal door is in fair condition.
- Recommendation: Replace the metal door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof covering is a flat single-ply membrane roof in fair condition. The gutters are exterior to the roof with the downspouts exposed.
- Recommendation: Replace the roof covering.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on studs and drywall mounted onto load-bearing concrete walls. All of them are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The doors are solid core wood doors in metal frames and are in good condition. The closet doors and kitchenette walls are vinyl accordion type sliding partitions.
- Recommendation: Replace the bathroom doors. Replace the closet and kitchenette accordion type sliding partitions with bi-fold doors.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The exterior stairs are concrete. The stairs have heavy spalling and cracking and are in poor condition. Some areas of the balconies near the stairs are cracking and are in poor condition.
- Recommendation: Replace the concrete stairs. Repair the cracked balconies.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. Some recently renovated rooms are using a Duraplex-type finish.
- Recommendation: Install vinyl wall covering in living area/bedrooms and install full height ceramic tile in the bathrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchenette areas have vinyl composition tile. The floor finishes are in fair condition.

- Recommendation: Replace the carpet. Replace the vinyl composition tile with ceramic tile.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall and concrete in good condition.
- Recommendation: Paint the ceilings.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and a porcelain lavatory with countertop and wood vanity. All of the fixtures are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: Access to the mechanical rooms was not available. The building contains one gas boiler with an accompanying hot water tank. The boiler system is in poor condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: PTAC units provide heating and cooling. These are in poor condition. The bathroom and kitchenette exhaust systems are in good condition.
- Recommendation: Replace the PTAC units.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Access to the electrical rooms was not available. The electrical service is believed to be through a 120/208Y volt, 1600 amp main panel located in the small electric room. The electrical service is original and is in fair condition. The lighting is incandescent in the units. The lighting is in good condition. Outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace the main service, branch circuits and lighting.

#### **Communications and Security**

- **Analysis:** The fire alarm system consists of hard-wired smoke and heat detectors located in each room. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are not readily visible outside of the living units.
- **Recommendation:** Replace the fire alarm system. Install exit signs and emergency lights.

## **Equipment**

### **Other Equipment**

- **Analysis:** The rooms contain kitchenettes and include base and wall cabinets, a small stove, a sink, a microwave, and compact refrigerator. There is no ventilation hood but there is an adjacent exhaust vent in the wall. The kitchenettes are in fair condition.
- **Recommendation:** Replace kitchenettes.

## **Site Preparation**

### **Site Earthwork**

- **Analysis:** The site consists of grass covered yard areas, trees, and shrubs in good condition.
- **Recommendation:** No corrective action required.

## **Site Improvements**

### **Parking Lots**

- **Analysis:** The asphalt parking lots are in fair condition. The concrete sidewalks around the building are in fair condition. They are intact but have settled in several places.
- **Recommendation:** Resurface the parking lot and settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- **Analysis:** The site lighting is in good condition.
- **Recommendation:** Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.82%</b>	<b>\$14,088.21</b>
Parking: AC Pavement Damaged or Failing		\$9,440.69
Walks: Concrete Walk Damaged or Failing		\$4,647.52
<b>03 Concrete</b>	<b>6.68%</b>	<b>\$114,500.55</b>
Concrete Walls: Damaged and Cracked		\$42,504.00
Concrete Stairs - Damaged or Failing		\$71,996.55
<b>05 Metals</b>	<b>1.44%</b>	<b>\$24,704.40</b>
Railings - Inadequate or Missing		\$24,704.40
<b>06 Wood &amp; Plastics</b>	<b>3.69%</b>	<b>\$63,334.43</b>
Countertop: Beyond Useful Life		\$502.43
Wall Sheathing: Damaged or Failing		\$62,832.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.48%</b>	<b>\$59,651.32</b>
Gutters: Damaged or Failing		\$9,535.26
Roof Deck Insulation: Damaged or Failing		\$25,005.83
Single Ply Roof: Damaged or Failing		\$25,110.23
<b>08 Doors &amp; Windows</b>	<b>8.93%</b>	<b>\$153,081.74</b>
Exterior Steel Door - Beyond expected useful life		\$70,679.41
Storefront - Beyond Useful Life		\$0.00
Wood Door - Beyond Useful Life		\$42,559.45
Wood Door - Damaged or Failing		\$39,842.88
<b>09 Finishes</b>	<b>16.68%</b>	<b>\$285,995.77</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$2,190.23
Carpet: Beyond Useful Life		\$30,696.24
Covered Walkway Ceiling: Paint Failing		\$2,358.04
Floor Tile: Damaged or Failing		\$36,368.38
Interior ceilings: Paint Failing		\$8,611.05
Interior walls: Paint failing		\$7,017.70
Quarry Floor Tile: Damaged or Failing		\$2,391.54
Vinyl Wall Covering: Beyond expected useful life		\$109,975.98
Wall Tile: Damaged or Failing		\$86,386.61
<b>10 Specialties</b>	<b>0.22%</b>	<b>\$3,827.10</b>
BR Accessories: Replace due to remodel		\$3,827.10
<b>11 Equipment</b>	<b>9.44%</b>	<b>\$161,746.20</b>
Unit Kitchen: Beyond Useful Life		\$161,746.20
<b>13 Special Construction</b>	<b>6.52%</b>	<b>\$111,808.18</b>
Fire Alarm System: Beyond Useful Life		\$19,749.24
Fire Sprinklers: Missing or Inadequate		\$92,058.94
<b>15 Mechanical</b>	<b>14.93%</b>	<b>\$256,027.92</b>
Boiler: Damaged or failing		\$15,486.98
Domestic water system: Beyond expected useful life		\$56,056.37
Sewage System: Beyond expected useful life		\$25,734.11

Sink & vanity: Replace due to remodel		\$36,510.08
Sink, janitorial: Beyond expected useful life		\$3,247.66
Tub: Beyond expected useful life		\$73,213.14
Water closet: Beyond expected useful life		\$45,779.58
<b>16 Electrical</b>	<b>14.32%</b>	<b>\$245,541.54</b>
Bollard light: Beyond expected useful life		\$1,527.75
Branch Circuits: Beyond Expected Useful Life		\$72,897.00
Emergency light: Beyond expected useful life		\$4,810.89
Fixture: Incandescent fixture beyond expected life		\$96,423.78
Fixtures, fluoresent: Beyond expected useful life		\$23,927.82
Inadequate exterior Lighting		\$12,222.00
Main service: Beyond expected useful life		\$33,732.30
<b>19 FF&amp;E</b>	<b>12.83%</b>	<b>\$220,000.00</b>
Hard and soft goods: Beyond expected useful life		\$220,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,714,307.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,428.69
Force Protection	9.00%	\$170,564.98
General Conditions	10.00%	\$171,430.70
<b>Total Additional Hard Cost</b>		<b>\$351,424.36</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$206,573.14
SIOH Conus	6.50%	\$147,699.79
Design	10.00%	\$206,573.14
08 MYr Inflation Fct	9.93%	\$260,819.14
<b>Total Soft Cost</b>		<b>\$821,665.20</b>
<b>Total Project</b>		<b>\$2,887,396.57</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.20%</b>	<b>\$86,524.20</b>
Parking Lots		\$39,102.00
Site Earthwork		\$47,422.20
<b>03 Concrete</b>	<b>18.15%</b>	<b>\$490,233.28</b>
Floor Construction		\$342,246.28
Slab on Grade		\$35,070.00
Stair Construction		\$7,717.50
Standard Foundations		\$105,199.50
<b>04 Masonry</b>	<b>5.03%</b>	<b>\$135,858.28</b>
Exterior Walls		\$135,858.28
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.35%</b>	<b>\$144,598.93</b>
Roof Construction		\$57,957.05
Roof Coverings		\$86,641.88
<b>08 Doors &amp; Windows</b>	<b>9.76%</b>	<b>\$263,576.25</b>
Exterior Doors		\$14,159.25
Exterior Windows		\$201,600.00
Interior Doors		\$47,817.00
<b>09 Finishes</b>	<b>13.59%</b>	<b>\$367,077.23</b>
Ceiling Finishes		\$56,938.93
Floor Finishes		\$140,284.24
Partitions		\$96,102.31
Wall Finishes		\$73,751.75
<b>10 Specialties</b>	<b>0.06%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>5.99%</b>	<b>\$161,700.00</b>
Other Equipment		\$161,700.00
<b>13 Special Construction</b>	<b>4.69%</b>	<b>\$126,660.20</b>
Communications & Security		\$57,018.13
Sprinklers		\$69,642.07
<b>15 Mechanical</b>	<b>19.11%</b>	<b>\$516,289.20</b>
Cooling Generating Systems		\$168,319.20
Domestic Water Dist		\$83,160.00
Plumbing Fixtures		\$264,810.00
<b>16 Electrical</b>	<b>6.94%</b>	<b>\$187,396.65</b>
Electrical Service & Distribution		\$185,091.90
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>8.14%</b>	<b>\$220,000.00</b>
Interior FF&E allowance		\$220,000.00
Total Raw Cost	100.00%	\$2,701,497.62

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$14,858.24
Force Protection	0.00%	\$0.00



General Cond	10.00%	\$270,149.76
<b>Total Additional Hard Cost</b>		<b>\$285,008.00</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$149,325.28
SIOH Conus	6.50%	\$203,829.01
Design	10.00%	\$298,650.56
08 MYr Inflation Fct	9.93%	\$361,284.23
<b>Total Soft Cost</b>		<b>\$1,013,089.08</b>
<b>Total Project Cost for Replacement</b>		<b>\$3,999,594.70</b>

**INSERT BUILDING 2603 FLOOR PLANS HERE**



*This is similar to #2602.*

## Building 2604

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Building 2604 was constructed in 1974. The 3,717 square foot facility contains 8 lodging units: 8 single bedrooms with full bathroom and kitchenette. The building is functioning as 8 extended stay rooms.

### Significant Assumptions

The replacement and renovation cost models are based on 8 extended stay rooms.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$594,030.00
Replacement Cost	\$775,815.00
Condition Assessment to Replacement Cost Ratio	76.57%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2604 is not recommended.

## Attributes

01.Number of Units Constructed	8
02.Number of Units Used	8
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	8
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	8
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	8
15.Renovated to Family Suite	0
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, table with chairs, and desk with chair. The soft goods consist of curtains, TV, mattress and box springs and bed coverings. Most of them are in fair condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams in compacted soil. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second and third floors are precast concrete slabs. Precast load-bearing concrete walls support the floor slabs. All are in poor condition due to spalling.
- Recommendation: Repair the spalling.

#### **Roof Construction**

- Analysis: The roof structure is a precast concrete slab. Precast load-bearing concrete walls support the roof structure. The superstructure is poor due to heavy spalling and exposed, heavily corroded reinforcing bars at wall and slab connections.
- Recommendation: Repair the spalling.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are part of the structural walls for the building. The outside part of the walls is an exposed aggregate finish in good condition. The living unit walls facing the balconies and walkways have vinyl-covered panels in poor condition. The other surfaces are bare concrete.
- Recommendation: Replace the vinyl panels.

#### **Exterior Windows**

- Analysis: This building does not contain windows in the living units.
- Recommendation: No corrective action required.

### **Exterior Doors**

- Analysis: The living units have both a metal insulated door with keyless lockset and a metal sliding patio door. The patio door is in good condition but the metal door is in fair condition.
- Recommendation: Replace the metal door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof covering is sloped standing-seam metal roof in fair condition. There are small areas that have flat single-ply membrane roofs. Although the building is not old, there have been numerous roof leaks that are still being repaired by the contractor. The gutters are exterior to the roof with the downspouts exposed.
- Recommendation: No corrective action required due to ongoing contractor repairs.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on studs and drywall mounted onto load-bearing concrete walls. All of them are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The doors are solid core wood doors in metal frames and are in good condition. The closet doors and kitchenette walls are vinyl accordion type sliding partitions.
- Recommendation: Replace bathroom doors. Replace the closet and kitchenette accordion type sliding partitions with bi-fold doors.

### **Stairs**

#### **Stair Construction**

- Analysis: The exterior stairs are concrete. The stairs have heavy spalling and cracking and are in poor condition. Some areas of the balconies near the stairs are cracking and are in poor condition.
- Recommendation: Replace the concrete stairs. Repair the cracked balconies.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. Some recently renovated rooms are using a Duraplex-type finish.
- Recommendation: Install vinyl wall covering in living area/bedrooms and full height ceramic tile in the bathrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchenette areas have vinyl composition tile. The floor finishes are in fair condition.

- Recommendation: Replace the carpet. Replace the vinyl composition tile with ceramic tile.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall and concrete in good condition.
- Recommendation: Paint the ceilings.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and a porcelain lavatory with countertop and wood vanity. All of the fixtures are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: Access to the mechanical rooms was not available. The building contains one gas boiler with an accompanying hot water tank. The boiler system is in poor condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: PTAC units provide heating and cooling. These are in good condition. The bathroom and kitchenette exhaust systems are in good condition.
- Recommendation: No corrective action required.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Access to the electrical rooms was not available. The electrical service is believed to be through a 120/208Y volt, 1600 amp main panel located in the small electric room. The electrical service is original and is in fair condition. The lighting is incandescent in the units. The lighting is in good condition. The outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace the main service, branch circuits and lighting.

#### **Communications and Security**

- **Analysis:** The fire alarm system consists of hard-wired smoke and heat detectors located in each room. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are not readily visible outside of the living units.
- **Recommendation:** Replace the fire alarm system. Install exit signs and emergency lights.

## **Equipment**

### **Other Equipment**

- **Analysis:** The rooms contain kitchenettes and include base and wall cabinets, a small stove, a sink, a microwave, and compact refrigerator. There is no ventilation hood but there is an adjacent exhaust vent in the wall. The kitchenettes are in fair condition.
- **Recommendation:** Replace kitchenettes.

## **Site Preparation**

### **Site Earthwork**

- **Analysis:** The site consists of grass covered yard areas, trees, and shrubs in good condition.
- **Recommendation:** No corrective action required.

## **Site Improvements**

### **Parking Lots**

- **Analysis:** The asphalt parking lots are in fair condition. The concrete sidewalks around the building are in fair condition. They are intact but have settled in several places.
- **Recommendation:** Resurface the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- **Analysis:** The site lighting is in good condition.
- **Recommendation:** Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building.



## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.89%</b>	<b>\$3,154.09</b>
Parking: AC Pavement Damaged or Failing		\$2,113.59
Walks: Concrete Walk Damaged or Failing		\$1,040.50
<b>03 Concrete</b>	<b>4.32%</b>	<b>\$15,222.32</b>
Concrete Walls: Damaged and Cracked		\$3,864.00
Concrete Stairs - Damaged or Failing		\$11,358.32
<b>05 Metals</b>	<b>1.05%</b>	<b>\$3,712.80</b>
Railings - Inadequate or Missing		\$3,712.80
<b>06 Wood &amp; Plastics</b>	<b>0.93%</b>	<b>\$3,267.26</b>
Wall Sheathing: Damaged or Failing		\$3,267.26
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.73%</b>	<b>\$13,159.57</b>
Gutters: Damaged or Failing		\$3,004.68
Roof Deck Insulation: Damaged or Failing		\$5,067.14
Single Ply Roof: Damaged or Failing		\$5,087.75
<b>08 Doors &amp; Windows</b>	<b>10.79%</b>	<b>\$38,048.13</b>
Exterior Steel Door - Beyond expected useful life		\$23,559.81
Wood Door - Beyond Useful Life		\$7,244.16
Wood Door - Damaged or Failing		\$7,244.16
<b>09 Finishes</b>	<b>13.87%</b>	<b>\$48,920.01</b>
Carpet: Beyond Useful Life		\$5,581.17
Covered Walkway Ceiling: Paint Failing		\$443.52
Floor Tile: Damaged or Failing		\$5,516.03
Interior ceilings: Paint Failing		\$1,549.99
Interior walls: Paint failing		\$911.90
Vinyl Wall Covering: Beyond expected useful life		\$19,210.74
Wall Tile: Damaged or Failing		\$15,706.66
<b>10 Specialties</b>	<b>0.18%</b>	<b>\$651.42</b>
BR Accessories: Replace due to remodel		\$651.42
<b>11 Equipment</b>	<b>8.34%</b>	<b>\$29,408.40</b>
Unit Kitchen: Beyond Useful Life		\$29,408.40
<b>13 Special Construction</b>	<b>5.33%</b>	<b>\$18,783.15</b>
Fire Alarm System: Beyond Useful Life		\$3,317.42
Fire Sprinklers: Missing or Inadequate		\$15,465.73
<b>15 Mechanical</b>	<b>16.15%</b>	<b>\$56,944.61</b>
Boiler: Damaged or failing		\$15,486.98
Domestic water system: Beyond expected useful life		\$9,009.98
Sewage System: Beyond expected useful life		\$4,321.93
Sink & vanity: Replace due to remodel		\$6,490.68
Tub: Beyond expected useful life		\$13,311.48
Water closet: Beyond expected useful life		\$8,323.56

<b>16 Electrical</b>	<b>23.08%</b>	<b>\$81,415.98</b>
Bollard light: Beyond expected useful life		\$1,527.75
Branch Circuits: Beyond Expected Useful Life		\$12,245.54
Emergency light: Beyond expected useful life		\$808.74
Fixture: Incandescent fixture beyond expected life		\$16,198.12
Fixtures, fluorescent: Beyond expected useful life		\$4,681.53
Inadequate exterior Lighting		\$12,222.00
Main service: Beyond expected useful life		\$33,732.30
<b>19 FF&amp;E</b>	<b>11.34%</b>	<b>\$40,000.00</b>
Hard and soft goods: Beyond expected useful life		\$40,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$352,688.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$1,939.78
Force Protection	9.00%	\$35,090.69
General Conditions	10.00%	\$35,268.80
<b>Total Additional Hard Cost</b>		<b>\$72,299.28</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$42,498.73
SIOH Conus	6.50%	\$30,386.59
Design	10.00%	\$42,498.73
08 MYr Inflation Fct	9.93%	\$53,658.87
<b>Total Soft Cost</b>		<b>\$169,042.92</b>
<b>Total Project</b>		<b>\$594,030.19</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.84%</b>	<b>\$20,096.34</b>
Parking Lots		\$7,182.00
Site Earthwork		\$12,914.34
<b>03 Concrete</b>	<b>15.05%</b>	<b>\$78,886.91</b>
Floor Construction		\$42,651.41
Slab on Grade		\$9,507.75
Stair Construction		\$7,717.50
Standard Foundations		\$19,010.25
<b>04 Masonry</b>	<b>9.20%</b>	<b>\$48,220.03</b>
Exterior Walls		\$48,220.03
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.59%</b>	<b>\$34,516.10</b>
Roof Construction		\$10,467.29
Roof Coverings		\$24,048.82
<b>08 Doors &amp; Windows</b>	<b>13.99%</b>	<b>\$73,322.55</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$50,400.00
Interior Doors		\$12,606.30
<b>09 Finishes</b>	<b>12.94%</b>	<b>\$67,792.91</b>
Ceiling Finishes		\$10,702.60
Floor Finishes		\$26,306.95
Partitions		\$17,344.71
Wall Finishes		\$13,438.66
<b>11 Equipment</b>	<b>5.61%</b>	<b>\$29,400.00</b>
Other Equipment		\$29,400.00
<b>13 Special Construction</b>	<b>4.37%</b>	<b>\$22,888.34</b>
Communications & Security		\$10,303.56
Sprinklers		\$12,584.79
<b>15 Mechanical</b>	<b>13.38%</b>	<b>\$70,106.40</b>
Cooling Generating Systems		\$30,416.40
Domestic Water Dist		\$15,120.00
Plumbing Fixtures		\$24,570.00
<b>16 Electrical</b>	<b>7.40%</b>	<b>\$38,790.68</b>
Electrical Service & Distribution		\$36,485.93
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>7.63%</b>	<b>\$40,000.00</b>
Interior FF&E allowance		\$40,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$524,020.26</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$2,882.11
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$52,402.03
<b>Total Additional Hard Cost</b>		<b>\$55,284.14</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$28,965.22
SIOH Conus	6.50%	\$39,537.53
Design	10.00%	\$57,930.44
08 MYr Inflation Fct	9.93%	\$70,079.74
<b>Total Soft Cost</b>		<b>\$196,512.93</b>
<b>Total Project Cost for Replacement</b>		<b>\$775,817.33</b>

**INSERT BUILDING 2604 FLOOR PLANS HERE**



Front exterior.

## Building 2605

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Building 2605 was constructed in 1974. The 11,038 square foot facility contains 24 lodging units: 24 single bedrooms with full bathroom and kitchenette. The building is functioning as 24 extended stay rooms.

### Significant Assumptions

The replacement and renovation cost models are based on 24 extended stay rooms.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,626,635.00
Replacement Cost	\$2,395,515.00
Condition Assessment to Replacement Cost Ratio	67.90%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2605 is not recommended.

## Attributes

01.Number of Units Constructed	24
02.Number of Units Used	24
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	24
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	24
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	24
15.Renovated to Family Suite	0
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, table with chairs, and desk with chair. The soft goods consist of curtains, TV, mattress and box springs and bed coverings. Most of them are in fair condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams in compacted soil. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second and third floors are precast concrete slabs. Precast load-bearing concrete walls support the floor slabs. All are in poor condition due to spalling.
- Recommendation: Repair the spalling.

#### **Roof Construction**

- Analysis: The roof structure is a precast concrete slab. Precast load-bearing concrete walls support the roof structure. The superstructure is poor due to heavy spalling and exposed, heavily corroded reinforcing bars at wall and slab connections.
- Recommendation: Repair the spalling.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are part of the structural walls for the building. The outside part of the walls is an exposed aggregate finish in good condition. The living unit walls facing the balconies and walkways have vinyl-covered panels in poor condition. The other surfaces are bare concrete.
- Recommendation: Replace the vinyl panels.

#### **Exterior Windows**

- Analysis: This building does not contain windows in the living units.
- Recommendation: No corrective action required.

### **Exterior Doors**

- Analysis: The living units have both a metal insulated door with keyless lockset and a metal sliding patio door. The patio door is in good condition but the metal door is in fair condition.
- Recommendation: Replace the metal door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof covering is a flat single-ply membrane roof in fair condition. The gutters are exterior to the roof with the downspouts exposed.
- Recommendation: Replace the roof covering.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on studs and drywall mounted onto load-bearing concrete walls. All of them are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The doors are solid core wood doors in metal frames and are in good condition. The closet doors and kitchenette walls are vinyl accordion type sliding partitions.
- Recommendation: Replace the bathroom doors. Replace the closet and kitchenette accordion type sliding partitions with bi-fold doors.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The exterior stairs are concrete. The stairs have heavy spalling and cracking and are in poor condition. Some areas of the balconies near the stairs are cracking and are in poor condition.
- Recommendation: Replace the concrete stairs. Repair the cracked balconies.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. Some recently renovated rooms are using a Duraplex-type finish.
- Recommendation: Install vinyl wall covering in living area/bedrooms and full height ceramic tile in the bathrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchenette areas have vinyl composition tile. The floor finishes are in fair condition.



- Recommendation: Replace the carpet. Replace the vinyl composition tile with ceramic tile.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall and concrete in fair condition.
- Recommendation: Paint the ceilings.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and a porcelain lavatory with countertop and wood vanity. All of the fixtures are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: Access to the mechanical rooms was not available. The building contains one gas boiler with an accompanying hot water tank. The boiler system is in poor condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: PTAC units provide heating and cooling. These are in good condition. The bathroom and kitchenette exhaust systems are in good condition.
- Recommendation: No corrective action required.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Access to the electrical rooms was not available. The electrical service is believed to be through a 120/208Y volt, 1600 amp main panel located in the small electric room. The electrical service is original and is in fair condition. The lighting is incandescent in the units. The lighting is in good condition. The outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace the main service, branch circuits and lighting.

#### **Communications and Security**

- **Analysis:** The fire alarm system consists of hard-wired smoke and heat detectors located in each room. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are not readily visible outside of the living units.
- **Recommendation:** Replace the fire alarm system. Install exit signs and emergency lights.

## **Equipment**

### **Other Equipment**

- **Analysis:** The rooms contain kitchenettes and include base and wall cabinets, a small stove, a sink, a microwave, and compact refrigerator. There is no ventilation hood but there is an adjacent exhaust vent in the wall. The kitchenettes are in good condition.
- **Recommendation:** Replace the kitchenettes.

## **Site Preparation**

### **Site Earthwork**

- **Analysis:** The site consists of grass covered yard areas, trees, and shrubs in good condition.
- **Recommendation:** No corrective action required.

## **Site Improvements**

### **Parking Lots**

- **Analysis:** The asphalt parking lots are in fair condition. The concrete sidewalks around the building are in fair condition. They are intact but have settled in several places.
- **Recommendation:** Resurface the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- **Analysis:** The site lighting is in good condition.
- **Recommendation:** Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.65%</b>	<b>\$6,255.57</b>
Parking: AC Pavement Damaged or Failing		\$4,191.94
Walks: Concrete Walk Damaged or Failing		\$2,063.63
<b>03 Concrete</b>	<b>5.93%</b>	<b>\$57,216.81</b>
Concrete Walls: Damaged and Cracked		\$23,184.00
Concrete Stairs - Damaged or Failing		\$34,032.81
<b>05 Metals</b>	<b>2.31%</b>	<b>\$22,276.80</b>
Railings - Inadequate or Missing		\$22,276.80
<b>06 Wood &amp; Plastics</b>	<b>4.06%</b>	<b>\$39,207.17</b>
Wall Sheathing: Damaged or Failing		\$39,207.17
<b>07 Thermal &amp; Moisture Protection</b>	<b>2.50%</b>	<b>\$24,108.34</b>
Gutters: Damaged or Failing		\$4,813.62
Roof Deck Insulation: Damaged or Failing		\$9,626.11
Single Ply Roof: Damaged or Failing		\$9,668.61
<b>08 Doors &amp; Windows</b>	<b>11.09%</b>	<b>\$107,076.43</b>
Exterior Steel Door - Beyond expected useful life		\$63,611.47
Wood Door - Beyond Useful Life		\$21,732.48
Wood Door - Damaged or Failing		\$21,732.48
<b>09 Finishes</b>	<b>15.25%</b>	<b>\$147,155.42</b>
Carpet: Beyond Useful Life		\$16,743.29
Covered Walkway Ceiling: Paint Failing		\$1,993.82
Floor Tile: Damaged or Failing		\$16,548.08
Interior ceilings: Paint Failing		\$4,649.97
Interior walls: Paint failing		\$2,460.65
Vinyl Wall Covering: Beyond expected useful life		\$57,639.64
Wall Tile: Damaged or Failing		\$47,119.97
<b>10 Specialties</b>	<b>0.22%</b>	<b>\$2,117.12</b>
BR Accessories: Replace due to remodel		\$2,117.12
<b>11 Equipment</b>	<b>9.90%</b>	<b>\$95,577.30</b>
Unit Kitchen: Beyond Useful Life		\$95,577.30
<b>13 Special Construction</b>	<b>5.78%</b>	<b>\$55,771.90</b>
Fire Alarm System: Beyond Useful Life		\$9,851.42
Fire Sprinklers: Missing or Inadequate		\$45,920.48
<b>15 Mechanical</b>	<b>14.56%</b>	<b>\$140,541.04</b>
Boiler: Damaged or failing		\$15,486.98
Domestic water system: Beyond expected useful life		\$26,755.01
Sewage System: Beyond expected useful life		\$12,839.33
Sink & vanity: Replace due to remodel		\$19,472.04
Sink, janitorial: Beyond expected useful life		\$1,082.56
Tub: Beyond expected useful life		\$39,934.44
Water closet: Beyond expected useful life		\$24,970.68

<b>16 Electrical</b>	<b>15.32%</b>	<b>\$147,869.68</b>
Bollard light: Beyond expected useful life		\$1,527.75
Branch Circuits: Beyond Expected Useful Life		\$36,363.55
Emergency light: Beyond expected useful life		\$2,400.55
Fixture: Incandescent fixture beyond expected life		\$48,099.11
Fixtures, fluorescent: Beyond expected useful life		\$13,524.42
Inadequate exterior Lighting		\$12,222.00
Main service: Beyond expected useful life		\$33,732.30
<b>19 FF&amp;E</b>	<b>12.43%</b>	<b>\$120,000.00</b>
Hard and soft goods: Beyond expected useful life		\$120,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$965,174.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$5,308.46
Force Protection	9.00%	\$96,029.99
General Conditions	10.00%	\$96,517.40
<b>Total Additional Hard Cost</b>		<b>\$197,855.84</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$116,302.98
SIOH Conus	6.50%	\$83,156.63
Design	10.00%	\$116,302.98
08 MYr Inflation Fct	9.93%	\$146,844.09
<b>Total Soft Cost</b>		<b>\$462,606.69</b>

<b>Total Project</b>		<b>\$1,625,636.54</b>
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## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.02%</b>	<b>\$48,875.14</b>
Parking Lots		\$21,546.00
Site Earthwork		\$27,329.14
<b>03 Concrete</b>	<b>17.66%</b>	<b>\$285,718.59</b>
Floor Construction		\$197,266.59
Slab on Grade		\$20,186.25
Stair Construction		\$7,717.50
Standard Foundations		\$60,548.25
<b>04 Masonry</b>	<b>5.80%</b>	<b>\$93,771.75</b>
Exterior Walls		\$93,771.75
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.15%</b>	<b>\$83,297.41</b>
Roof Construction		\$33,109.79
Roof Coverings		\$50,187.62
<b>08 Doors &amp; Windows</b>	<b>10.02%</b>	<b>\$162,188.25</b>
Exterior Doors		\$14,159.25
Exterior Windows		\$117,600.00
Interior Doors		\$30,429.00
<b>09 Finishes</b>	<b>12.63%</b>	<b>\$204,386.76</b>
Ceiling Finishes		\$31,447.02
Floor Finishes		\$77,580.55
Partitions		\$54,410.28
Wall Finishes		\$40,948.91
<b>10 Specialties</b>	<b>0.10%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>5.45%</b>	<b>\$88,200.00</b>
Other Equipment		\$88,200.00
<b>13 Special Construction</b>	<b>4.51%</b>	<b>\$72,900.09</b>
Communications & Security		\$32,817.15
Sprinklers		\$40,082.94
<b>15 Mechanical</b>	<b>21.36%</b>	<b>\$345,622.20</b>
Cooling Generating Systems		\$96,877.20
Domestic Water Dist		\$45,360.00
Plumbing Fixtures		\$203,385.00
<b>16 Electrical</b>	<b>6.89%</b>	<b>\$111,489.53</b>
Electrical Service & Distribution		\$109,184.78
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>7.42%</b>	<b>\$120,000.00</b>
Interior FF&E allowance		\$120,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,618,033.11</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$8,899.18
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$161,803.31
<b>Total Additional Hard Cost</b>		<b>\$170,702.49</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$89,436.78
SIOH Conus	6.50%	\$122,081.20
Design	10.00%	\$178,873.56
08 MYr Inflation Fct	9.93%	\$216,387.33
<b>Total Soft Cost</b>		<b>\$606,778.87</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,395,514.47</b>

**INSERT BUILDING 2605 FLOOR PLANS HERE**





## Building 2606

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Building 2606 was constructed in 1974. The 12,040 square foot facility contains 26 lodging units: 26 single bedrooms with full bathroom and kitchenette. The building is functioning as 26 extended stay rooms.

### Significant Assumptions

The replacement and renovation cost models are based on 26 extended stay rooms.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,669,850.00
Replacement Cost	\$2,556,290.00
Condition Assessment to Replacement Cost Ratio	65.32%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2606 is not recommended.

## Attributes

01.Number of Units Constructed	26
02.Number of Units Used	26
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	26
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	26
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	26
15.Renovated to Family Suite	0
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Guest Rooms: The hard goods consist of a headboard, nightstand, lamps, table with chairs, and desk with chair. The soft goods consist of curtains, TV, mattress and box springs and bed coverings. Most of them are in fair condition.
- Recommendation: Replace the hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams in compacted soil. No clear failures can be seen from perimeter. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second and third floors are precast concrete slabs. Precast load-bearing concrete walls support the floor slabs. All of them are in poor condition due to spalling.
- Recommendation: Repair the spalling.

#### **Roof Construction**

- Analysis: The roof structure is a precast concrete slab. Precast load-bearing concrete walls support the roof structure. The superstructure is poor due to heavy spalling and exposed, heavily corroded reinforcing bars at wall and slab connections.
- Recommendation: Repair the spalling.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are part of the structural walls for the building. The outside part of the walls is an exposed aggregate finish in good condition. The living unit walls facing the balconies and walkways have vinyl-covered panels in poor condition. The other surfaces are bare concrete.
- Recommendation: Replace the vinyl panels.

#### **Exterior Windows**

- Analysis: This building does not contain windows in the living units.
- Recommendation: No corrective action required.

### **Exterior Doors**

- Analysis: The living units have both a metal insulated door with keyless lockset and a metal sliding patio door. The patio door is in good condition but the metal door is in fair condition.
- Recommendation: Replace the metal door.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof covering is a flat single-ply membrane roof in fair condition. The gutters are exterior to the roof with the downspouts exposed.
- Recommendation: Replace the roof covering.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall on studs and drywall mounted onto load-bearing concrete walls. All of them are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: The doors are solid core wood doors in metal frames and are in good condition. The closet doors and kitchenette walls are vinyl accordion type sliding partitions.
- Recommendation: Replace the bathroom doors. Replace the closet and kitchenette accordion type sliding partitions with bi-fold doors.

#### **Fittings**

- Analysis: There are no toilet partitions in this building.
- Recommendation: No corrective action required.

### **Stairs**

#### **Stair Construction**

- Analysis: The exterior stairs are concrete. The stairs have heavy spalling and cracking and are in poor condition. Some areas of the balconies near the stairs are cracking and are in poor condition.
- Recommendation: Replace the concrete stairs. Repair the cracked balconies.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The wall finishes are painted drywall in good condition. Some recently renovated rooms are using a Duraplex-type finish.
- Recommendation: Install vinyl wall covering in living area/bedrooms and full height ceramic tile in the bathrooms.

#### **Floor Finishes**

- Analysis: The units have carpet and the bathrooms and kitchenette areas have vinyl composition tile. The floor finishes are in fair condition.

- Recommendation: Replace the carpet. Replace the vinyl composition tile with ceramic tile.

#### **Ceiling Finishes**

- Analysis: The ceilings are painted drywall and concrete in good condition.
- Recommendation: Paint the ceilings.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub/shower combination, and a porcelain lavatory with countertop and wood vanity. All of the fixtures are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: Access to the mechanical rooms was not available. The building contains one gas boiler with an accompanying hot water tank. The boiler system is in poor condition. The piping is original and is in fair condition.
- Recommendation: Replace the gas boiler and tank. Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: PTAC units provide heating and cooling. These are in good condition. The bathroom and kitchenette exhaust systems are in good condition.
- Recommendation: No corrective action required.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install a new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Access to the electrical rooms was not available. The electrical service is believed to be through a 120/208Y volt, 1600 amp main panel located in the small electric room. The electrical service is original and is in fair condition. The lighting is incandescent in the units. The lighting is in good condition. The outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace the main service, branch circuits and lighting.

#### **Communications and Security**

- **Analysis:** The fire alarm system consists of hard-wired smoke and heat detectors located in each room. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are not readily visible outside of the living units.
- **Recommendation:** Replace fire alarm system. Install exit signs and emergency lights.

## **Equipment**

### **Other Equipment**

- **Analysis:** The rooms contain kitchenettes and include base and wall cabinets, a small stove, a sink, a microwave, and compact refrigerator. There is no ventilation hood but there is an adjacent exhaust vent in the wall. The kitchenettes are in good condition.
- **Recommendation:** Replace the kitchenettes.

## **Site Preparation**

### **Site Earthwork**

- **Analysis:** The site consists of grass covered yard areas, trees, and shrubs in good condition.
- **Recommendation:** No corrective action required.

## **Site Improvements**

### **Parking Lots**

- **Analysis:** The asphalt parking lots are in fair condition. The concrete sidewalks around the building are in fair condition. They are intact but have settled in several places.
- **Recommendation:** Resurface the parking lot and the settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- **Analysis:** The site lighting is in good condition.
- **Recommendation:** Replace the site lighting.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.73%</b>	<b>\$7,190.03</b>
Parking: AC Pavement Damaged or Failing		\$4,814.28
Walks: Concrete Walk Damaged or Failing		\$2,375.75
<b>03 Concrete</b>	<b>4.73%</b>	<b>\$46,919.49</b>
Concrete Walls: Damaged and Cracked		\$4,636.80
Concrete Stairs - Damaged or Failing		\$42,282.69
<b>05 Metals</b>	<b>1.66%</b>	<b>\$16,422.00</b>
Railings - Inadequate or Missing		\$16,422.00
<b>06 Wood &amp; Plastics</b>	<b>2.06%</b>	<b>\$20,420.40</b>
Wall Sheathing: Damaged or Failing		\$20,420.40
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.42%</b>	<b>\$33,926.22</b>
Gutters: Damaged or Failing		\$5,825.40
Roof Deck Insulation: Damaged or Failing		\$14,020.32
Single Ply Roof: Damaged or Failing		\$14,080.50
<b>08 Doors &amp; Windows</b>	<b>14.48%</b>	<b>\$143,585.24</b>
Exterior Steel Door - Beyond expected useful life		\$68,323.42
Sliding Glass Door: Beyond Useful Life		\$28,174.78
Wood Door - Beyond Useful Life		\$23,543.52
Wood Door - Damaged or Failing		\$23,543.52
<b>09 Finishes</b>	<b>15.98%</b>	<b>\$158,439.28</b>
Carpet: Beyond Useful Life		\$18,139.94
Covered Walkway Ceiling: Paint Failing		\$1,382.31
Floor Tile: Damaged or Failing		\$17,927.10
Interior ceilings: Paint Failing		\$5,037.78
Interior walls: Paint failing		\$2,460.65
Vinyl Wall Covering: Beyond expected useful life		\$62,444.87
Wall Tile: Damaged or Failing		\$51,046.63
<b>10 Specialties</b>	<b>0.21%</b>	<b>\$2,117.12</b>
BR Accessories: Replace due to remodel		\$2,117.12
<b>11 Equipment</b>	<b>9.64%</b>	<b>\$95,577.30</b>
Unit Kitchen: Beyond Useful Life		\$95,577.30
<b>13 Special Construction</b>	<b>6.10%</b>	<b>\$60,469.61</b>
Fire Alarm System: Beyond Useful Life		\$10,394.95
Fire Sprinklers: Missing or Inadequate		\$50,074.66
<b>15 Mechanical</b>	<b>12.30%</b>	<b>\$121,982.65</b>
Boiler: Damaged or failing		\$15,486.98
Domestic water system: Beyond expected useful life		\$2.06
Sewage System: Beyond expected useful life		\$14,002.46
Sink & vanity: Replace due to remodel		\$21,094.71
Sink, janitorial: Beyond expected useful life		\$1,082.56
Tub: Beyond expected useful life		\$43,262.31

Water closet: Beyond expected useful life		\$27,051.57
<b>16 Electrical</b>	<b>15.57%</b>	<b>\$154,375.37</b>
Bollard light: Beyond expected useful life		\$1,527.75
Branch Circuits: Beyond Expected Useful Life		\$38,368.78
Emergency light: Beyond expected useful life		\$2,535.82
Fixture: Incandescent fixture beyond expected life		\$52,464.30
Fixtures, fluorescent: Beyond expected useful life		\$13,524.42
Inadequate exterior Lighting		\$12,222.00
Main service: Beyond expected useful life		\$33,732.30
<b>19 FF&amp;E</b>	<b>13.11%</b>	<b>\$130,000.00</b>
Hard and soft goods: Beyond expected useful life		\$130,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$991,425.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$5,452.84
Force Protection	9.00%	\$98,641.83
General Conditions	10.00%	\$99,142.50
<b>Total Additional Hard Cost</b>		<b>\$203,237.17</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$119,466.22
SIOH Conus	6.50%	\$85,418.35
Design	10.00%	\$119,466.22
08 MYr Inflation Fct	9.93%	\$150,837.99
<b>Total Soft Cost</b>		<b>\$475,188.76</b>
<b>Total Project</b>		<b>\$1,669,850.93</b>



## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.04%</b>	<b>\$52,479.26</b>
Parking Lots		\$23,142.00
Site Earthwork		\$29,337.26
<b>03 Concrete</b>	<b>17.73%</b>	<b>\$306,159.99</b>
Floor Construction		\$211,759.74
Slab on Grade		\$21,672.00
Stair Construction		\$7,717.50
Standard Foundations		\$65,010.75
<b>04 Masonry</b>	<b>5.69%</b>	<b>\$98,201.91</b>
Exterior Walls		\$98,201.91
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.18%</b>	<b>\$89,468.04</b>
Roof Construction		\$35,632.54
Roof Coverings		\$53,835.51
<b>08 Doors &amp; Windows</b>	<b>9.98%</b>	<b>\$172,327.05</b>
Exterior Doors		\$14,159.25
Exterior Windows		\$126,000.00
Interior Doors		\$32,167.80
<b>09 Finishes</b>	<b>12.79%</b>	<b>\$220,823.25</b>
Ceiling Finishes		\$33,995.90
Floor Finishes		\$83,850.92
Partitions		\$58,720.77
Wall Finishes		\$44,255.65
<b>10 Specialties</b>	<b>0.09%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>5.53%</b>	<b>\$95,550.00</b>
Other Equipment		\$95,550.00
<b>13 Special Construction</b>	<b>4.53%</b>	<b>\$78,272.94</b>
Communications & Security		\$35,235.83
Sprinklers		\$43,037.12
<b>15 Mechanical</b>	<b>21.01%</b>	<b>\$362,684.70</b>
Cooling Generating Systems		\$104,017.20
Domestic Water Dist		\$49,140.00
Plumbing Fixtures		\$209,527.50
<b>16 Electrical</b>	<b>6.90%</b>	<b>\$119,075.78</b>
Electrical Service & Distribution		\$116,771.03
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>7.53%</b>	<b>\$130,000.00</b>
Interior FF&E allowance		\$130,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,726,626.31</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,496.44
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$172,662.63
<b>Total Additional Hard Cost</b>		<b>\$182,159.08</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$95,439.27
SIOH Conus	6.50%	\$130,274.60
Design	10.00%	\$190,878.54
08 MYr Inflation Fct	9.93%	\$230,910.02
<b>Total Soft Cost</b>		<b>\$647,502.43</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,556,287.82</b>

**INSERT BUILDING 2606 FLOOR PLANS HERE**



## Building 2607

---

Building 2607 was constructed in 1974. The 23,423 square foot facility contains 45 lodging units: 45 single bedrooms with full bathroom and kitchen. The building is functioning as 45 extended stay suites.

### Significant Assumptions

The replacement and renovation cost models are based on 45 extended stay units.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$3,689,750.00
Replacement Cost	\$4,078,115.00
Condition Assessment to Replacement Cost Ratio	90.48%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2607 is not recommended.

## Attributes

01.Number of Units Constructed	45
02.Number of Units Used	45
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	45
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	45
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	45
15.Renovated to Family Suite	0
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Hard goods consist of a headboard, nightstand, lamps, table with chairs, and desk with chair. Soft goods consist of curtains, TV, mattress and box springs and bed coverings. Hard and soft goods are in fair condition.
- Recommendation: Replace all hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams in compacted soil. No failures can be seen from perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second and third floors are precast concrete slabs. Precast load-bearing concrete walls support the floor slabs. All are in poor condition due to spalling.
- Recommendation: Repair the spalling.

#### **Roof Construction**

- Analysis: The roof structure is a precast concrete slab. Precast load-bearing concrete walls support the roof structure. The superstructure is poor due to heavy spalling and exposed, heavily corroded reinforcing bars at wall and slab connections. Gutters and downspouts are in poor condition.
- Recommendation: Repair the spalling. Replace gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: Exterior walls have an exposed aggregate finish, and are in good condition. The living unit walls facing the balconies and walkways have vinyl-covered panels which are in poor condition. Other surfaces are bare concrete.
- Recommendation: Replace the vinyl panels. Repair damaged concrete.

#### **Exterior Windows**

- Analysis: This building does not contain windows in the living units.

- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: Living units have both a metal insulated door with keyless lockset and a metal sliding patio door. Both doors are in fair condition.
- Recommendation: Replace the metal door and the patio door.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a flat single-ply membrane roof, which is in fair condition. Gutters are exterior to the roof with the downspouts exposed.
- Recommendation: Replace the single ply roofing.

#### **Interior Construction**

##### **Partitions**

- Analysis: Interior partitions are drywall on studs and drywall mounted onto load-bearing concrete walls. All are in fair condition.
- Recommendation: Repair damaged drywall partitions.

##### **Interior Doors**

- Analysis: Doors are solid core wood doors in metal frames and are in good condition. Closet doors and kitchen walls are vinyl accordion type sliding partitions.
- Recommendation: Replace bathroom doors. Replace closet and kitchen partitions with bi-fold doors.

##### **Fittings**

- Analysis: There are no other fittings in this building. Bathroom accessories are in fair condition.
- Recommendation: Replace bathroom accessories.

#### **Stairs**

##### **Stair Construction**

- Analysis: The exterior stairs are concrete. The stairs have heavy spalling and cracking and are in poor condition. Some areas of the balconies near the stairs are cracking and are in poor condition.
- Recommendation: Replace the concrete stairs. Repair the cracked balconies.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finishes are painted drywall and are in fair condition.
- Recommendation: Install vinyl wall covering and full height ceramic tile in bathrooms.

##### **Floor Finishes**

- Analysis: Floor finishes include carpet and vinyl composition tile. The floor finishes are in fair condition.
- Recommendation: Replace the carpet. Replace the vinyl composition tile with ceramic tile.

### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall and concrete, and are in good condition.
- Recommendation: Paint the ceilings.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Bathrooms contain a water closet, a tub and shower combination, and a porcelain lavatory with countertop and wood vanity. All fixtures are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: Access to the mechanical rooms was not available. The building contains one gas boiler with an accompanying hot water tank. The boiler system is in poor condition. The piping is original and is in fair condition.
- Recommendation: Replace gas boiler and tank. Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: PTAC units provide heating and cooling, and are in poor condition. The bathroom and kitchen exhaust systems are in good condition.
- Recommendation: Replace the PTAC units.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building does not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Access to the electrical rooms was not available. Electrical service is believed to be through a 120/208Y volt, 1600 amp main panel located in the small electrical room. The electrical service is original and is in fair condition. Lighting is incandescent, and is in fair condition. Outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace main service, branch circuits, and light fixtures.

#### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat detectors located in each room. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are not readily visible outside of the living units.
- Recommendation: Replace fire alarm system at end of its useful life. Install exit signs and emergency lights.

## **Equipment**

### **Other Equipment**

- Analysis: Kitchens include base and wall cabinets, a small stove, a sink, a microwave, and compact refrigerator. There is no ventilation hood but there is an adjacent exhaust vent. The kitchens are in fair condition.
- Recommendation: Replace kitchens.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs, and is in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in fair condition. The concrete sidewalks around the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Resurface the parking lot. Replace settled sections of sidewalk.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in good condition.
- Recommendation: No corrective action required.

## **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 2608, and are not included in this building.



## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.47%</b>	<b>\$10,250.75</b>
Parking: AC Pavement Damaged or Failing		\$6,869.16
Walks: Concrete Walk Damaged or Failing		\$3,381.59
<b>03 Concrete</b>	<b>5.86%</b>	<b>\$128,269.60</b>
Concrete Walls: Damaged and Cracked		\$68,624.64
Concrete Stairs - Damaged or Failing		\$59,644.96
<b>05 Metals</b>	<b>1.23%</b>	<b>\$26,846.40</b>
Railings - Inadequate or Missing		\$26,846.40
<b>06 Wood &amp; Plastics</b>	<b>3.02%</b>	<b>\$66,256.12</b>
Countertop: Beyond Useful Life		\$502.43
Wall Sheathing: Damaged or Failing		\$65,753.69
<b>07 Thermal &amp; Moisture Protection</b>	<b>2.03%</b>	<b>\$44,442.27</b>
Gutters: Damaged or Failing		\$7,910.28
Roof Deck Insulation: Damaged or Failing		\$18,227.34
Single Ply Roof: Damaged or Failing		\$18,304.65
<b>08 Doors &amp; Windows</b>	<b>11.69%</b>	<b>\$256,020.40</b>
Exterior Steel Door - Beyond expected useful life		\$120,154.99
Sliding Glass Door: Beyond Useful Life		\$49,841.00
Wood Door - Beyond Useful Life		\$44,370.49
Wood Door - Damaged or Failing		\$41,653.92
<b>09 Finishes</b>	<b>27.02%</b>	<b>\$591,970.55</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$2,060.86
Carpet: Beyond Useful Life		\$32,092.39
Covered Walkway Ceiling: Paint Failing		\$3,060.29
Drywall Ceilings: Damaged or Failing		\$38,744.82
Drywall Partition: Damaged or Failing		\$204,176.52
Floor Tile: Damaged or Failing		\$26,762.09
Interior ceilings: Paint Failing		\$9,275.78
Interior walls: Paint failing		\$5,498.68
Quarry Floor Tile: Damaged or Failing		\$7,059.53
Vinyl Wall Covering: Beyond expected useful life		\$172,926.32
Wall Tile: Damaged or Failing		\$90,313.27
<b>10 Specialties</b>	<b>0.10%</b>	<b>\$2,117.12</b>
BR Accessories: Replace due to remodel		\$2,117.12
<b>11 Equipment</b>	<b>7.72%</b>	<b>\$169,098.30</b>
Unit Kitchen: Beyond Useful Life		\$169,098.30
<b>13 Special Construction</b>	<b>5.40%</b>	<b>\$118,341.76</b>
Fire Alarm System: Beyond Useful Life		\$20,905.03
Fire Sprinklers: Missing or Inadequate		\$97,436.73
<b>15 Mechanical</b>	<b>13.24%</b>	<b>\$290,030.69</b>
Boiler: Damaged or failing		\$15,486.98

Domestic water system: Beyond expected useful life		\$29,184.00
PTAC: Beyond expected useful life		\$75,307.68
Sewage System: Beyond expected useful life		\$27,244.14
Sink & vanity: Replace due to remodel		\$38,132.75
Sink, janitorial: Beyond expected useful life		\$1,082.56
Tub: Beyond expected useful life		\$76,541.01
Water closet: Beyond expected useful life		\$27,051.57
<b>16 Electrical</b>	<b>11.73%</b>	<b>\$257,038.14</b>
Bollard light: Beyond expected useful life		\$1,527.75
Branch Circuits: Beyond Expected Useful Life		\$77,166.11
Emergency light: Beyond expected useful life		\$5,097.29
Fixture: Incandescent fixture beyond expected life		\$102,064.44
Fixtures, fluorescent: Beyond expected useful life		\$25,228.25
Inadequate exterior Lighting		\$12,222.00
Main service: Beyond expected useful life		\$33,732.30
<b>19 FF&amp;E</b>	<b>10.50%</b>	<b>\$230,000.00</b>
Hard and soft goods: Beyond expected useful life		\$230,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$2,190,682.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$12,048.75
Force Protection	9.00%	\$217,961.91
General Conditions	10.00%	\$219,068.20
<b>Total Additional Hard Cost</b>		<b>\$449,078.86</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$263,976.09
SIOH Conus	6.50%	\$188,742.90
Design	10.00%	\$263,976.09
08 MYr Inflation Fct	9.93%	\$333,296.07
<b>Total Soft Cost</b>		<b>\$1,049,991.15</b>
<b>Total Project</b>		<b>\$3,689,752.00</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.21%</b>	<b>\$88,326.26</b>
Parking Lots		\$39,900.00
Site Earthwork		\$48,426.26
<b>03 Concrete</b>	<b>18.13%</b>	<b>\$499,401.36</b>
Floor Construction		\$348,442.86
Slab on Grade		\$35,810.25
Stair Construction		\$7,717.50
Standard Foundations		\$107,430.75
<b>04 Masonry</b>	<b>5.01%</b>	<b>\$138,073.36</b>
Exterior Walls		\$138,073.36
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.36%</b>	<b>\$147,645.44</b>
Roof Construction		\$59,179.62
Roof Coverings		\$88,465.83
<b>08 Doors &amp; Windows</b>	<b>9.75%</b>	<b>\$268,645.65</b>
Exterior Doors		\$14,159.25
Exterior Windows		\$205,800.00
Interior Doors		\$48,686.40
<b>09 Finishes</b>	<b>13.62%</b>	<b>\$375,126.20</b>
Ceiling Finishes		\$58,211.84
Floor Finishes		\$143,419.43
Partitions		\$98,116.27
Wall Finishes		\$75,378.66
<b>10 Specialties</b>	<b>0.06%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>6.00%</b>	<b>\$165,375.00</b>
Other Equipment		\$165,375.00
<b>13 Special Construction</b>	<b>4.70%</b>	<b>\$129,346.62</b>
Communications & Security		\$58,227.47
Sprinklers		\$71,119.16
<b>15 Mechanical</b>	<b>19.05%</b>	<b>\$524,820.45</b>
Cooling Generating Systems		\$171,889.20
Domestic Water Dist		\$85,050.00
Plumbing Fixtures		\$267,881.25
<b>16 Electrical</b>	<b>6.94%</b>	<b>\$191,189.78</b>
Electrical Service & Distribution		\$188,885.03
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>8.17%</b>	<b>\$225,000.00</b>
Interior FF&E allowance		\$225,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$2,754,533.52</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$15,149.93
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$275,453.35
<b>Total Additional Hard Cost</b>		<b>\$290,603.29</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$152,256.84
SIOH Conus	6.50%	\$207,830.59
Design	10.00%	\$304,513.68
08 MYr Inflation Fct	9.93%	\$368,376.97
<b>Total Soft Cost</b>		<b>\$1,032,978.08</b>
<b>Total Project Cost for Replacement</b>		<b>\$4,078,114.89</b>

**INSERT BUILDING 2607 FLOOR PLANS HERE**



2608 is a support building.

## Building 2608

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Building 2608 was constructed in 1974. The building contains no lodging units. The building is functioning as lodging administration.

### Significant Assumptions

The replacement and renovation cost models are based on 3000 square foot facility housing front desk service and certain administrative functions.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$310,305.00
Replacement Cost	\$553,900.00
Condition Assessment to Replacement Cost Ratio	56.02%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 2608 is not recommended.

## Attributes

01.Number of Units Constructed	0
02.Number of Units Used	0
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	0
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: This building contains no guest rooms, but contains office furnishings, lobby furniture, tables and chairs.
- Recommendation: No corrective action required.

### **Foundations**

#### **Standard Foundations**

- Analysis: Foundation is composed of grade beams in compacted soil. No clear failures can be seen from perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof structure is a precast concrete slab. Load-bearing CMU walls support the roof structure. The superstructure is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are a split-face brick veneer with a CMU wall back-up in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**

- Analysis: The windows are a storefront type with single-glazed glazing in aluminum frames in fair condition.
- Recommendation: Replace with energy efficient windows. Also consider retrofitting to the ATFP standards.

#### **Exterior Doors**

- Analysis: Building entry doors are single-wide aluminum and glazed doors. The utility doors are commercial grade metal door with metal frames. All doors are in fair condition.
- Recommendation: Replace the exterior doors.

### **Roofing**

### **Roof Coverings**

- Analysis: The roof covering is a flat single-ply membrane roof in fair condition. The drainage system uses roof drains.
- Recommendation: Replace the roof membrane.

### **Interior Construction**

#### **Partitions**

- Analysis: Interior partitions are drywall on studs, drywall mounted onto load-bearing concrete walls, and exposed brick finishes. All are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: Doors are solid core wood doors in metal frames, some with glazing, in poor condition.
- Recommendation: Replace interior doors.

### **Stairs**

#### **Stair Construction**

- Analysis: This building contains no stairs.
- Recommendation: No corrective action required.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: The primary wall finishes are painted CMU and drywall and exposed brick. Finishes are in good condition.
- Recommendation: Install vinyl wall coverings where it currently does not exist. Paint all remaining surfaces.

#### **Floor Finishes**

- Analysis: The floor finish is vinyl composition tile. All floor coverings are in good condition.
- Recommendation: Replace carpet at the end of its useful life. Replace vinyl composition tile at the end of its useful life with quarry tile and ceramic tile.

#### **Ceiling Finishes**

- Analysis: Ceilings are acoustical ceiling tiles in fair condition.
- Recommendation: Install painted the gypsum board ceilings in restrooms and laundry. Replace acoustical ceiling tile in the lobby/lounge area and housekeeping areas.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: This building contains one public restrooms and one employee restroom. Each contains a water closets and a lavatory mounted on the wall. They are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**



- Analysis: Hot water is produced from a 50-gallon electric residential type water heater. The water heater is in fair condition. The building system piping is in fair condition.
- Recommendation: Replace the hot water boiler. Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: PTAC units provide heating and cooling. These are in poor condition.
- Recommendation: Replace the PTAC units.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building did not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electric service is through a 120/208Y volt, 400 amp main panel. The electrical service is original and is in fair condition. Lighting uses fluorescent and some incandescent fixtures. Lighting is in fair condition. Outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace main service, branch circuits, and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat detectors located throughout the building. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are not readily visible.
- Recommendation: Replace fire alarm system at end of its useful life. Install exit signs and emergency lights.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lot is in fair condition.

The concrete sidewalks around the building are in fair condition. They are intact but have settled in several places. The central outdoor mail distribution area is in poor condition.

- Recommendation: Resurface the parking lot.

Remove mailboxes and replace concrete slab. Replace settled sections of sidewalk.

### **Site Electrical Utilities**

#### **Site Lighting**

- Analysis: The site lighting is in good condition.
- Recommendation: Replace the site lighting at the end of its useful life.

### **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Bulk Storage

Space exists, but is not required as part of a secondary facility.

Renovation Recommendation: Bulk storage is added to the new Main Lodging facility.

- **Public Spaces**

Lounge

Space exists, but is not part of Army Lodging standards.

Renovation Recommendation: Building is being turned back over to installation to determine an alternate use.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>10.17%</b>	<b>\$18,745.18</b>
Basketball Backboards: Damaged or Failing		\$13,655.25
Parking: AC Pavement Damaged or Failing		\$3,945.36
Walks: Concrete Walk Damaged or Failing		\$1,144.57
<b>06 Wood &amp; Plastics</b>	<b>0.27%</b>	<b>\$502.43</b>
Countertop: Beyond Useful Life		\$502.43
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.42%</b>	<b>\$13,675.48</b>
Roof Deck Insulation: Damaged or Failing		\$6,822.97
Single Ply Roof: Damaged or Failing		\$6,852.51
<b>08 Doors &amp; Windows</b>	<b>14.14%</b>	<b>\$26,049.94</b>
Al. Windows - Beyond Useful Life		\$13,794.69
Exterior Steel Door - Beyond expected useful life		\$9,423.92
Storefront - Beyond Useful Life		\$2,831.33
<b>09 Finishes</b>	<b>15.10%</b>	<b>\$27,820.95</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$7,357.85
Carpet: Beyond Useful Life		\$384.99
Drywall Ceilings: Damaged or Failing		\$173.88
Floor Tile: Damaged or Failing		\$3,061.87
Interior ceilings: Paint Failing		\$162.31
Interior walls: Paint failing		\$2,339.23
Quarry Floor Tile: Damaged or Failing		\$8,786.04
VCT: Beyond Useful Life		\$905.55
Vinyl Wall Covering: Beyond expected useful life		\$4,649.23
<b>13 Special Construction</b>	<b>8.00%</b>	<b>\$14,741.95</b>
Fire Alarm System: Beyond Useful Life		\$2,606.10
Fire Sprinklers: Missing or Inadequate		\$12,135.85
<b>15 Mechanical</b>	<b>22.54%</b>	<b>\$41,529.85</b>
Boiler: Beyond expected useful life		\$15,486.98
Domestic water system: Beyond expected useful life		\$7,079.22
PTAC: Beyond expected useful life		\$7,846.86
PTAC: Missing or inadequate		\$1,853.46
Sewage System: Beyond expected useful life		\$3,394.67
Sink & vanity: Replace due to remodel		\$1,622.67
Sink, janitorial: Beyond expected useful life		\$2,165.10
Water closet: Beyond expected useful life		\$2,080.89
<b>16 Electrical</b>	<b>22.35%</b>	<b>\$41,168.48</b>
Branch Circuits: Beyond Expected Useful Life		\$9,619.58
Emergency light: Beyond expected useful life		\$631.96
Exit Light: Beyond expected useful life		\$1,071.00
Fixture: Incandescent fixture beyond expected life		\$2,937.38
Fixtures, fluorescent: Beyond expected useful life		\$6,762.21
Inadequate exterior Lighting		\$7,035.00
Main service: Beyond expected useful life		\$7,208.25

Panelboard: Beyond expected useful life		\$5,903.10
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$184,234.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$1,013.29
Force Protection	9.00%	\$18,330.36
General Conditions	10.00%	\$18,423.40
<b>Total Additional Hard Cost</b>		<b>\$37,767.05</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$22,200.10
SIOH Conus	6.50%	\$15,873.08
Design	10.00%	\$22,200.10
08 MYr Inflation Fct	9.93%	\$28,029.84
<b>Total Soft Cost</b>		<b>\$88,303.13</b>
<b>Total Project</b>		<b>\$310,304.17</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>7.10%</b>	<b>\$26,580.75</b>
Parking Lots		\$6,384.00
Site Earthwork		\$20,196.75
<b>03 Concrete</b>	<b>14.52%</b>	<b>\$54,316.50</b>
Floor Construction		\$16,800.00
Slab on Grade		\$14,899.50
Stair Construction		\$7,717.50
Standard Foundations		\$14,899.50
<b>04 Masonry</b>	<b>10.59%</b>	<b>\$39,605.64</b>
Exterior Walls		\$39,605.64
<b>07 Thermal &amp; Moisture Protection</b>	<b>12.28%</b>	<b>\$45,931.94</b>
Roof Construction		\$8,680.87
Roof Coverings		\$37,251.07
<b>08 Doors &amp; Windows</b>	<b>9.90%</b>	<b>\$37,036.65</b>
Exterior Doors		\$6,473.25
Exterior Windows		\$21,000.00
Interior Doors		\$9,563.40
<b>09 Finishes</b>	<b>15.88%</b>	<b>\$59,429.61</b>
Ceiling Finishes		\$9,136.35
Floor Finishes		\$23,150.77
Partitions		\$15,330.75
Wall Finishes		\$11,811.74
<b>13 Special Construction</b>	<b>4.79%</b>	<b>\$17,939.00</b>
Communications & Security		\$8,075.53
Sprinklers		\$9,863.47
<b>15 Mechanical</b>	<b>15.65%</b>	<b>\$58,567.95</b>
Cooling Generating Systems		\$23,839.20
Domestic Water Dist		\$13,230.00
Plumbing Fixtures		\$21,498.75
<b>16 Electrical</b>	<b>7.94%</b>	<b>\$29,718.15</b>
Electrical Service & Distribution		\$27,413.40
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>1.34%</b>	<b>\$5,000.00</b>
Interior FF&E allowance		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$374,126.20</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$2,057.69
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$37,412.62
<b>Total Additional Hard Cost</b>		<b>\$39,470.31</b>

### Soft Cost (Template: Army Lodging New Construction)

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$20,679.83
SIOH Conus	6.50%	\$28,227.96
Design	10.00%	\$41,359.65
08 MYr Inflation Fct	9.93%	\$50,033.69
<b>Total Soft Cost</b>		<b>\$140,301.13</b>
<b>Total Project Cost for Replacement</b>		<b>\$553,897.64</b>

**INSERT BUILDING 2608 FLOOR PLANS HERE**



Front exterior.

## Building 4016

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Building 4016 (St George House) was constructed in 1942. The 1,830 square foot facility contains 1 DVQ : 4 bedrooms with a full bathroom and kitchen. The building is functioning as a single family suite.

### Significant Assumptions

The replacement and renovation cost models are based on 1 extended stay unit and 3 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$280,535.00
Replacement Cost	\$543,655.00
Condition Assessment to Replacement Cost Ratio	51.60%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 4016 is not recommended.

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	1
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	1
15.Renovated to Family Suite	3
16.Delta renovation	3



## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Hard goods consist of a headboard, nightstand, and armoire in each bedroom; a couch, easy chair, coffee table, end table in the living rooms; a dinette set in the dining room. All are in fair condition. Soft goods consist of drapes and blinds on the windows, TV, mattress and box springs and bed coverings. All are in fair condition.
- Recommendation: Replace all hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation consists of concrete basement walls and steel columns supporting laminated wood beams over the basement area. The foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: There is no slab on grade in this building.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a wood joist system supported by basement walls and steel columns. The second floor is a wood joist system. Both are in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The steeply pitched roof is constructed with wood trusses and wood decking. The roof is supported by a wood frame structure. The superstructure is in good condition, but gutters and downspouts are in poor condition.
- Recommendation: Replace gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: Exterior walls are vinyl siding, and are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Windows**

- Analysis: The windows are wood, double-glazed sliders, and are in fair condition.
- Recommendation: Replace the windows.

#### **Exterior Doors**

- Analysis: The exterior doors are metal insulated doors, which are in fair condition.
- Recommendation: Replace the exterior doors.

## **Roofing**

### **Roof Coverings**

- Analysis: The roof is a sloped asphalt shingle roof on a wood deck. Gutters are exterior to the roof with the downspouts exposed. Shingles are in fair condition.
- Recommendation: Replace the asphalt shingles.

## **Interior Construction**

### **Partitions**

- Analysis: Interior partitions are drywall on wood studs. Partition walls are in good condition.
- Recommendation: No corrective action required.

### **Interior Doors**

- Analysis: Doors are solid core wood doors in wood frames and are in fair condition.
- Recommendation: Replace interior doors.

## **Stairs**

### **Stair Construction**

- Analysis: Stairs are wood framed with wood handrails and are in fair condition. The front entry stairs are cracked and in poor condition.
- Recommendation: Repair wooden stairs. Replace front entry stairs.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: Wall finishes are painted drywall, and are in good condition. The bathroom has a ceramic tile wainscot, and is in good condition.
- Recommendation: Install vinyl wall covering and full height ceramic tile.

### **Floor Finishes**

- Analysis: Floor finishes are wood floors and ceramic tile, and are in fair condition.
- Recommendation: Install carpet. RegROUT the ceramic tile floors.

### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall, and are in good condition. Paint is in fair condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each bathroom contains a water closet, a tub and shower combination, and a wall mounted lavatory. All fixtures are in good condition. Plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures and plumbing lines. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: The building contains a 75-gallon gas hot water heater, which is in good condition. The piping is original and is in fair condition.
- Recommendation: Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: The mechanical system consists of a split-system air conditioning system and a central air gas furnace. Both are in fair condition.
- Recommendation: Replace central air system HVAC.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building does not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Electrical service is provided through a 125 amp main panel, which is in good condition. The wiring is original and is in fair condition. Lighting uses incandescent fixtures which are in good condition. Outlets in the building are not in sufficient quantity.
- Recommendation: Replace branch circuits. Replace light fixtures.

#### **Communications and Security**

- Analysis: The fire alarm system consists of battery-powered smoke detectors located throughout the building. It is in poor condition.
- Recommendation: Replace fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: The kitchen includes base and wall cabinets, a stove, a sink, a microwave, range hood, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs, and is in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt driveway is in good condition. The concrete sidewalks around the building are in good condition.
- Recommendation: No corrective action required.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in fair condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>03 Concrete</b>	<b>2.59%</b>	<b>\$4,318.95</b>
Concrete Stairs - Damaged or Failing		\$4,318.95
<b>06 Wood &amp; Plastics</b>	<b>3.92%</b>	<b>\$6,522.44</b>
Base Cabinets: Beyond Useful Life		\$2,789.48
Upper cabinets: Beyond expected useful life		\$3,732.96
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.45%</b>	<b>\$12,412.26</b>
Asphalt Shingle Roof: Beyond Useful Life		\$11,032.56
Gutters: Damaged or Failing		\$1,379.70
<b>08 Doors &amp; Windows</b>	<b>17.20%</b>	<b>\$28,655.46</b>
Wood Door - Beyond Useful Life		\$20,826.97
Wood Framed windows: Damaged or failing		\$7,828.49
<b>09 Finishes</b>	<b>18.52%</b>	<b>\$30,846.69</b>
Carpet: Beyond Useful Life		\$5,493.20
Drywall Ceilings: Damaged or Failing		\$2,182.20
Floor Tile: Damaged or Failing		\$2,927.23
Interior ceilings: Paint Failing		\$1,417.41
Interior walls: Paint failing		\$1,038.28
Vinyl Wall Covering: Beyond expected useful life		\$13,125.45
Wall Tile: Damaged or Failing		\$4,662.92
<b>10 Specialties</b>	<b>0.10%</b>	<b>\$162.86</b>
BR Accessories: Replace due to remodel		\$162.86
<b>11 Equipment</b>	<b>0.50%</b>	<b>\$841.05</b>
Stove: Missing or inadequate		\$841.05
<b>13 Special Construction</b>	<b>0.98%</b>	<b>\$1,633.28</b>
Fire Alarm System: Missing or Inadequate		\$1,633.28
<b>15 Mechanical</b>	<b>19.01%</b>	<b>\$31,667.66</b>
Domestic water system: Beyond expected useful life		\$4,438.19
Furnace: Beyond expected useful life		\$4,550.70
Restroom exhaust: Beyond expected useful life		\$3,003.47
Sewage System: Beyond expected useful life		\$2,130.21
Sink & vanity: Replace due to remodel		\$1,622.67
Sink, janitorial: Beyond expected useful life		\$1,082.56
Sink, kitchen: Beyond expected useful life		\$2,543.10
Split System: Beyond expected useful life		\$6,888.00
Tub: Beyond expected useful life		\$3,327.87
Water closet: Beyond expected useful life		\$2,080.89
<b>16 Electrical</b>	<b>17.71%</b>	<b>\$29,499.07</b>
Branch Circuits: Beyond Expected Useful Life		\$6,029.88
Fixture: Incandescent fixture beyond expected life		\$7,974.23
Fixtures, fluorescent: Beyond expected useful life		\$780.26
Inadequate exterior Lighting		\$12,222.00

Main service: Beyond expected useful life		\$2,492.70
<b>19 FF&amp;E</b>	<b>12.01%</b>	<b>\$20,000.00</b>
Hard and soft goods: Beyond expected useful life		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$166,560.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$916.08
Force Protection	9.00%	\$16,571.89
General Conditions	10.00%	\$16,656.00
<b>Total Additional Hard Cost</b>		<b>\$34,143.97</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$20,070.40
SIOH Conus	6.50%	\$14,350.33
Design	10.00%	\$20,070.40
08 MYr Inflation Fct	9.93%	\$25,340.87
<b>Total Soft Cost</b>		<b>\$79,832.00</b>
<b>Total Project</b>		<b>\$280,535.97</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.60%</b>	<b>\$13,229.48</b>
Parking Lots		\$3,990.00
Site Earthwork		\$9,239.48
<b>03 Concrete</b>	<b>16.18%</b>	<b>\$59,420.09</b>
Floor Construction		\$31,353.59
Slab on Grade		\$6,783.00
Stair Construction		\$7,717.50
Standard Foundations		\$13,566.00
<b>04 Masonry</b>	<b>11.47%</b>	<b>\$42,123.24</b>
Exterior Walls		\$42,123.24
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.85%</b>	<b>\$25,162.60</b>
Roof Construction		\$7,789.72
Roof Coverings		\$17,372.88
<b>08 Doors &amp; Windows</b>	<b>14.80%</b>	<b>\$54,349.05</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$33,600.00
Interior Doors		\$10,432.80
<b>09 Finishes</b>	<b>13.06%</b>	<b>\$47,969.64</b>
Ceiling Finishes		\$7,630.62
Floor Finishes		\$15,090.27
Partitions		\$13,542.85
Wall Finishes		\$11,705.90
<b>11 Equipment</b>	<b>4.00%</b>	<b>\$14,700.00</b>
Other Equipment		\$14,700.00
<b>13 Special Construction</b>	<b>4.45%</b>	<b>\$16,333.46</b>
Communications & Security		\$7,352.77
Sprinklers		\$8,980.69
<b>15 Mechanical</b>	<b>12.09%</b>	<b>\$44,385.60</b>
Cooling Generating Systems		\$21,705.60
Domestic Water Dist		\$10,395.00
Plumbing Fixtures		\$12,285.00
<b>16 Electrical</b>	<b>8.04%</b>	<b>\$29,535.45</b>
Electrical Service & Distribution		\$27,230.70
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.45%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$367,208.61</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$2,019.65
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$36,720.86
<b>Total Additional Hard Cost</b>		<b>\$38,740.51</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$20,297.46
SIOH Conus	6.50%	\$27,706.03
Design	10.00%	\$40,594.91
08 MYr Inflation Fct	9.93%	\$49,108.57
<b>Total Soft Cost</b>		<b>\$137,706.96</b>
<b>Total Project Cost for Replacement</b>		<b>\$543,656.08</b>



**INSERT BUILDING 4016 FLOOR PLANS HERE**



## Building 4770

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Building 4770 was constructed in 1954. The 132,162 square foot facility contains 196 lodging units: 180 single bedroom units and 16 family suites with full bathroom and kitchenette. The building is functioning as 184 extended stay rooms and 16 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 196 extended stay units and 16 family suite units.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$13,774,545.00
Replacement Cost	\$22,773,285.00
Condition Assessment to Replacement Cost Ratio	60.49%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 4770 is not recommended.

## Attributes

01.Number of Units Constructed	196
02.Number of Units Used	196
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	196
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	184
12.Operating as Family Suite	16
13.Renovated to Standard	0
14.Renovated to Extended Stay	196
15.Renovated to Family Suite	16
16.Delta renovation	16

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Hard goods consist of a headboard, nightstand, dresser, lamps, table with chair, couch, easy chair, coffee table, and end table. Soft goods consist of curtains, TV, mattress and box springs and bed coverings. Hard and soft good are in good condition.
- Recommendation: Replace all hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams and column footings in compacted soil. No failures can be seen from perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second through eighth floors are concrete slabs. A concrete frame supports the floor slabs. Floor construction is in good condition, except for rubber flooring, which is in poor condition.
- Recommendation: Replace rubber flooring.

#### **Roof Construction**

- Analysis: The roof structure is a concrete slab supported by a concrete frame. The roof slab is in good condition. Gutters and downspouts are in poor condition.
- Recommendation: Replace gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: Exterior walls are brick veneer, which are buckling outward, and are in poor condition. Also, the mortar joint at the height of each window lintel beam has significantly decayed, and may be contributing to water damage in the rooms.
- Recommendation: Replace damaged brick veneer. Repoint remaining brick veneer. Mitigate additional damage with window mortar joints.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders in good condition.
- Recommendation: No corrective action required.

### **Exterior Doors**

- Analysis: Exterior doors are double-wide or single-wide aluminum and glazed doors. The utility doors are commercial grade metal door with metal frames. All doors are in fair condition.
- Recommendation: Replace the exterior doors.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof covering is a flat single-ply membrane roof with ballast, and is in fair condition. Scuppers drain to the exterior wall surface of the building.
- Recommendation: Replace the roof membrane and scuppers.

### **Interior Construction**

#### **Partitions**

- Analysis: Interior partitions are plaster on metal studs and plaster on non-load-bearing CMU backup walls. Walls are in poor condition due to water damage at windows.
- Recommendation: Replace plaster at windows.

#### **Interior Doors**

- Analysis: Doors are solid core wood in metal frames and are in fair condition. Closet doors are bi-fold wood doors in fair condition. Room entry doors use keyless locksets.
- Recommendation: Replace interior doors.

#### **Fittings**

- Analysis: Fittings include toilet and urinal partitions in restrooms near the lobby and in the basement. The partitions are in fair condition.
- Recommendation: Replace partitions.

### **Stairs**

#### **Stair Construction**

- Analysis: Stairs are steel with concrete tread infill. There are four sets of stairs, which are in good condition but should be painted. The eighth floor does not have adequate emergency egress.
- Recommendation: Paint existing stairs. Construct new 8-story emergency egress stairwell.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: Wall finishes are painted plaster, and are in fair condition. Bathrooms have full height ceramic tile in good condition.
- Recommendation: Install vinyl wall covering. RegROUT bathroom tile.

#### **Floor Finishes**

- Analysis: Floor finishes include carpet, ceramic tile, and vinyl composition tile. The floor finishes are in fair condition.
- Recommendation: Replace the carpet and ceramic tile. Replace the vinyl composition tile with ceramic tile.

### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall, and are in good condition. Bathrooms typically have a vinyl panel ceiling, which is in poor condition.
- Recommendation: Paint ceilings. Replace bathroom ceilings with painted gypsum board ceilings.

### **Conveying**

#### **Elevators and Lifts**

- Analysis: There are two passenger elevators in the building, and they are in fair condition. There is one service elevator, which is also in fair condition.
- Recommendation: Replace the elevators.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a flush-valve toilet, a tub and shower combination, and a wall-mounted and pedestal supported porcelain lavatory. All fixtures are in fair condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: The building contains three gas boilers with an accompanying hot water tanks. The boiler system is in good condition. The piping is original and is in poor condition.
- Recommendation: Replace the water distribution system.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: The mechanical system is a vertical two-pipe fan-coil hydronic hot water heating system and chilled water system with one thermostat to control the entire building. Two gas and oil hot water boilers located in the mechanical room supply the hot water for heating, and are in fair condition. There are two chillers located adjacent to building - one primary and one backup unit. They are in fair condition. The office area has a split direct exchange system, which is in fair condition. The bathroom exhaust is a central draft induced system, which is in poor condition.
- Recommendation: Replace existing mechanical system with a system of PTAC units in each living area. Replace boiler, chiller, and some fan-coils to supply conditioned air to common areas. Replace the bathroom exhaust system.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building contains a sprinkler system in the basement only.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electrical service comes through multiple panels equivalent to 3000 amps. Power is distributed to sub-panels throughout the building. The electrical service is in fair condition. Lighting uses incandescent and some fluorescent fixtures. Lighting is in fair condition but wiring is original. Outlets in the building are not in sufficient quantity.
- Recommendation: Replace main service, branch circuits, and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in poor condition and near failure. Emergency lighting and exit signs are insufficient and in poor condition.
- Recommendation: Replace fire alarm system. Install exit signs and emergency lights.

## **Equipment**

### **Other Equipment**

- Analysis: Kitchens include base and wall cabinets, two burners, a sink, a microwave, range hood, and compact refrigerator. Kitchens are in fair condition.
- Recommendation: Replace kitchens

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs, and is in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in fair condition. The concrete sidewalks around the building are in good condition.
- Recommendation: Resurface the parking lot.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in fair condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Administrative Conference Room

Does not exist.

Renovation Recommendation: Space will be included in new main Lodging facility as part of Wellness recommendation.

- **Public Spaces**

Lounge, Post Office, Snack Bar, Barber Shop, TV Repair Shop, and PX Store

All these space are in this existing building but not part of Army Lodging standards.

Renovation Recommendation: Building is being turned back over to installation to determine an alternate use.

Breakfast Area (public space) and Prep Area (back-of-the-house)

Does not exist.

Renovation Recommendation: Space will be included in new main Lodging facility as part of Wellness recommendation.

Public Corridors

Existing corridors are only 5' wide in lieu of standard 6' wide corridors.

Renovation Recommendation: It is felt this deficit is not critical to the intent of the standards.

Multipurpose Room

Does not exist.

Renovation Recommendation: Space will be included in new main Lodging facility as part of Wellness recommendation.

Study Rooms

Do not exist.

Renovation Recommendation: Space will be included in new main Lodging facility as part of Wellness recommendation.

Receiving Area / Office

Does not exist.

Renovation Recommendation: Space will be included in new main Lodging facility as part of Wellness recommendation.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.20%</b>	<b>\$16,060.47</b>
Parking: AC Pavement Damaged or Failing		\$14,759.88
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>03 Concrete</b>	<b>5.70%</b>	<b>\$466,502.40</b>
Exterior Stairs - Insufficient Stairs		\$466,502.40
<b>04 Masonry</b>	<b>4.27%</b>	<b>\$349,126.47</b>
Brick Wall: Repoint		\$69,854.40
Face Brick - Damaged or Failing		\$279,272.07
<b>06 Wood &amp; Plastics</b>	<b>0.21%</b>	<b>\$17,224.46</b>
Base Cabinets: Beyond Useful Life		\$12,558.26
Upper cabinets: Beyond expected useful life		\$4,666.20
<b>07 Thermal &amp; Moisture Protection</b>	<b>0.51%</b>	<b>\$41,529.49</b>
Gutters: Damaged or Failing		\$1,226.40
Single Ply Roof: Damaged or Failing		\$40,303.09
<b>08 Doors &amp; Windows</b>	<b>9.22%</b>	<b>\$753,814.68</b>
Exterior Steel Door - Beyond expected useful life		\$16,491.87
Storefront - Beyond Useful Life		\$5,662.65
Wood Door - Beyond Useful Life		\$162,993.60
Wood Door - Damaged or Failing		\$568,666.56
<b>09 Finishes</b>	<b>15.73%</b>	<b>\$1,286,739.56</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$30,428.91
Carpet: Beyond Useful Life		\$251,225.79
Drywall Ceilings: Damaged or Failing		\$16,431.66
Floor Tile: Damaged or Failing		\$122,661.52
Interior ceilings: Paint Failing		\$65,918.52
Interior walls: Paint failing		\$35,795.34
Metal Trusses: Paint Failing		\$14,699.87
Plaster Partitions: Damaged or Failing		\$4,429.40
Quarry Floor Tile: Damaged or Failing		\$16,037.41
Rubber Gym Floor: Beyond Useful Life		\$7,931.88
VCT: Beyond Useful Life		\$5,484.66
Vinyl Wall Covering: Beyond expected useful life		\$610,654.28
Wall Tile: Damaged or Failing		\$105,040.32
<b>10 Specialties</b>	<b>0.25%</b>	<b>\$20,485.98</b>
BR Accessories: Replace due to remodel		\$14,982.66
Toilet Partitions: Beyond Useful Life		\$4,690.62
Urinal partition: Damaged		\$812.70
<b>11 Equipment</b>	<b>8.09%</b>	<b>\$661,689.00</b>
Unit Kitchen: Beyond Useful Life		\$661,689.00
<b>13 Special Construction</b>	<b>1.44%</b>	<b>\$117,954.59</b>
Fire Alarm System: Beyond Useful Life		\$117,954.59



<b>14 Conveying Systems</b>	<b>2.16%</b>	<b>\$176,856.75</b>
Elevator: Beyond expected useful life		\$176,856.75
<b>15 Mechanical</b>	<b>25.88%</b>	<b>\$2,116,807.76</b>
Boiler: Beyond expected useful life		\$15,486.98
Domestic water system: Beyond expected useful life		\$320,338.42
FCU: Beyond expected useful life		\$179,927.19
Hydronic heating system: Beyond expt useful life		\$115,592.82
PTAC: Missing or inadequate		\$444,830.40
Restroom exhaust: Damaged or failing		\$270,994.50
Sewage System: Beyond expected useful life		\$153,707.02
Sink & vanity: Replace due to remodel		\$150,096.98
Sink, janitorial: Beyond expected useful life		\$10,825.50
Sink, kitchen: Beyond expected useful life		\$5,086.20
Tub: Beyond expected useful life		\$299,508.30
Water Chillers: Damaged or failing		\$147,292.11
Water closet: Beyond expected useful life		\$3,121.34
<b>16 Electrical</b>	<b>15.33%</b>	<b>\$1,253,441.83</b>
Branch Circuits: Beyond Expected Useful Life		\$435,390.96
Emergency light: Beyond expected useful life		\$28,748.73
Exit Light: Beyond expected useful life		\$12,852.00
Fixture: Incandescent fixture beyond expected life		\$575,894.89
Fixtures, fluorescent: Beyond expected useful life		\$117,038.25
Inadequate exterior Lighting		\$36,666.00
Main service: Beyond expected useful life		\$46,851.00
<b>19 FF&amp;E</b>	<b>11.00%</b>	<b>\$900,000.00</b>
Hard and soft goods: Beyond expected useful life		\$900,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$8,178,233.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$44,980.28
Force Protection	9.00%	\$813,693.29
General Conditions	10.00%	\$817,823.30
<b>Total Additional Hard Cost</b>		<b>\$1,676,496.87</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$985,472.99
SIOH Conus	6.50%	\$704,613.19
Design	10.00%	\$985,472.99
08 MYr Inflation Fct	9.93%	\$1,244,257.70
<b>Total Soft Cost</b>		<b>\$3,919,816.86</b>
<b>Total Project</b>		<b>\$13,774,546.74</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>1.81%</b>	<b>\$278,133.32</b>
Parking Lots		\$186,732.00
Site Earthwork		\$91,401.32
<b>03 Concrete</b>	<b>33.34%</b>	<b>\$5,127,608.72</b>
Floor Construction		\$4,302,723.47
Slab on Grade		\$67,646.25
Stair Construction		\$216,090.00
Standard Foundations		\$541,149.00
<b>04 Masonry</b>	<b>3.32%</b>	<b>\$510,939.72</b>
Exterior Walls		\$510,939.72
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.04%</b>	<b>\$467,434.89</b>
Roof Construction		\$301,014.50
Roof Coverings		\$166,420.39
<b>08 Doors &amp; Windows</b>	<b>8.11%</b>	<b>\$1,246,945.35</b>
Exterior Doors		\$46,824.75
Exterior Windows		\$907,200.00
Interior Doors		\$292,920.60
<b>09 Finishes</b>	<b>12.24%</b>	<b>\$1,882,644.94</b>
Ceiling Finishes		\$289,621.52
Floor Finishes		\$690,276.52
Partitions		\$504,844.76
Wall Finishes		\$397,902.14
<b>10 Specialties</b>	<b>0.02%</b>	<b>\$3,558.98</b>
Fittings		\$3,558.98
<b>11 Equipment</b>	<b>5.06%</b>	<b>\$779,100.00</b>
Other Equipment		\$779,100.00
<b>13 Special Construction</b>	<b>4.24%</b>	<b>\$651,543.40</b>
Communications & Security		\$293,302.76
Sprinklers		\$358,240.64
<b>14 Conveying Systems</b>	<b>1.47%</b>	<b>\$225,540.00</b>
Elevators and Lifts		\$225,540.00
<b>15 Mechanical</b>	<b>14.34%</b>	<b>\$2,205,061.95</b>
Cooling Generating Systems		\$865,838.40
Domestic Water Dist		\$415,800.00
Plumbing Fixtures		\$923,423.55
<b>16 Electrical</b>	<b>6.13%</b>	<b>\$943,541.55</b>
Electrical Service & Distribution		\$936,627.30
Site Lighting		\$6,914.25
<b>19 FF&amp;E</b>	<b>6.89%</b>	<b>\$1,060,000.00</b>
Interior FF&E allowance		\$1,060,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$15,382,052.82</b>

**Additional Hard Cost (Template: Army Lodging New Construction)**

Parameter Name	Percent	Amount
Spirit	0.50%	\$84,601.29
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$1,538,205.28
<b>Total Additional Hard Cost</b>		<b>\$1,622,806.57</b>

**Soft Cost (Template: Army Lodging New Construction)**

Parameter Name	Percent	Amount
Contingency	5.00%	\$850,242.97
SIOH Conus	6.50%	\$1,160,581.65
Design	10.00%	\$1,700,485.94
08 MYr Inflation Fct	9.93%	\$2,057,115.68
<b>Total Soft Cost</b>		<b>\$5,768,426.24</b>
<b>Total Project Cost for Replacement</b>		<b>\$22,773,285.63</b>

**INSERT BUILDING 4770 FLOOR PLANS HERE**



## Building 7961

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Building 7961 was constructed in 1998. The 67,737 square foot facility contains 105 lodging units: 55 standard rooms and 50 family suites with full bathroom and kitchenette. The building is functioning as 55 standard rooms and 50 family suites.

### Significant Assumptions

The replacement cost model is based on 55 standard rooms and 50 family suites.

The renovation plan was not required because existing spaces meet current size requirements and the current building is in good condition to meet lodging requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$3,988,820.00
Replacement Cost	\$12,754,780.00
Condition Assessment to Replacement Cost Ratio	31.27%

Because the Condition Assessment to Replacement Cost Ratio is less than 50%, repair and continued use of Building 7961 is recommended.

## Attributes

01.Number of Units Constructed	105
02.Number of Units Used	105
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	55
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	50
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	55
11.Operating as Extended Stay	0
12.Operating as Family Suite	50
13.Renovated to Standard	55
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	50
16.Delta renovation	0

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Hard goods consist of a headboard, nightstand, lamps, and desk and table with chair. Soft goods consist of curtains, TV, mattress and box springs and bed coverings. Hard and soft goods are in fair condition.
- Recommendation: Replace all hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of grade beams in compacted soil. No failures can be seen from perimeter. Foundation is in good condition.
- Recommendation: No corrective action required.

#### **Slab on Grade**

- Analysis: The concrete slab on grade is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The first floor is a slab on grade. The second and third floors are precast concrete slabs. Load-bearing CMU walls support the floor slabs. All are in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The structure is a metal truss frame construction with steel purlins. CMU walls support the roof structure. The superstructure is in good condition.
- Recommendation: No corrective action required.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls are brick veneer and are in fair condition.
- Recommendation: Repoint brick veneer.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders, and are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: Most building entry doors are double-wide or single-wide aluminum and glazed doors. The utility doors are commercial grade metal door with metal frames. All doors are in good condition.
- Recommendation: No corrective action required.

## **Roofing**

### **Roof Coverings**

- Analysis: The roof is sloped standing-seam metal, and is in fair condition. There are small areas that have flat single-ply membrane roofs. There have been roof leaks that are still being repaired by the contractor. Gutters are exterior to the roof with the downspouts exposed.
- Recommendation: No corrective action required besides ongoing contractor repairs.

## **Interior Construction**

### **Partitions**

- Analysis: Interior partitions are drywall on metal studs and drywall mounted onto load-bearing CMU walls. All are in good condition.
- Recommendation: No corrective action required.

### **Interior Doors**

- Analysis: Doors are solid core wood doors in metal frames, and are in good condition. Closet doors are mirrored slider doors.
- Recommendation: No corrective action required.

### **Fittings**

- Analysis: Fittings include toilet and urinal partitions in restrooms near the lobby. All partitions are in fair condition.
- Recommendation: Replace accessories.

## **Stairs**

### **Stair Construction**

- Analysis: Stairs are steel with concrete tread infill. There are four sets of stairs, and they are in good condition.
- Recommendation: No corrective action required.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: Wall finishes are painted drywall and Duraplex finish. Wall finishes are in good condition.
- Recommendation: Install vinyl wall covering and full height ceramic tile in the bathrooms.

### **Floor Finishes**

- Analysis: Floor finishes include carpet and ceramic tile. The carpet is in fair condition, and the ceramic tile is in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors.

### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall or concrete, and are in good condition.
- Recommendation: Paint the gypsum board ceilings. Replace acoustical ceiling tile.

## **Conveying**

### **Elevators and Lifts**

- Analysis: There are two passenger elevators in the building, which are in good condition.
- Recommendation: No corrective action required.

### **Plumbing**

#### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet and a tub and shower combination, which are in good condition. A solid-surface lavatory in an elevated countertop sits in a niche outside the bathroom. All fixtures are in good condition.
- Recommendation: Replace the plumbing fixtures. Replace the bathroom accessories.

#### **Domestic Water Distribution**

- Analysis: The building contains three gas boilers with an accompanying hot water tanks. The boiler system is in good condition. The piping is original and is in good condition.
- Recommendation: No corrective action required.

### **HVAC**

#### **Cooling Generating Systems**

- Analysis: Two boilers and two reciprocating chillers supply water through a 4-pipe fan coil system. Rooms contain individual temperature controls. The HVAC system is in good condition. The bathroom exhaust ventilation is a constant volume induced draft system, and is in poor condition.
- Recommendation: Replace the bathroom exhaust system.

### **Fire Protection**

#### **Sprinklers**

- Analysis: This building contained a forced water sprinkler system running throughout the building, which is in good condition. Smoke and heat detectors are located throughout the building.
- Recommendation: No corrective action required.

### **Electrical**

#### **Electrical Service/Distribution**

- Analysis: Electrical service is supplied by a 120/208Y volt 2500 amp main panel located in the main mechanical room and distributed to sub-panels. The electrical service is in good condition. Lighting is incandescent in units, and is in fair condition. Outlets in the building are sufficient and in good condition.
- Recommendation: Replace lighting fixtures.

#### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the building. The system has an annunciator panel and is connected to the fire department. The system is in good condition. Exit signs and emergency lights are located throughout the building.
- Recommendation: No corrective action required.



## **Equipment**

### **Commercial Equipment**

- Analysis: There is no commercial equipment in this building.
- Recommendation: No corrective action required.

### **Other Equipment**

- Analysis: Kitchens include base and wall cabinets, two burners, a sink, a microwave, range hood, and compact refrigerator. The kitchenettes are in good condition.
- Recommendation: No corrective action required.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs, and is in good condition. The concrete sidewalks around the building are in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in fair condition.
- Recommendation: Replace parking lot.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in good condition.
- Recommendation: No corrective action required.

## **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

The building is currently the main lodging facility, and has several of the main Lodging facility back-of-the-house spaces and public spaces. These spaces will be in excess of Army Lodging requirements when the new main Lodging facility is built as part of the Wellness Recommendation. Manager's Office, Asst. Manager Office, Administrative space

Space exists, but is not sized to meet full size requirements for total rooms on installation.

Renovation Recommendation: Even though this space is not standard for a secondary facility, recommend leaving as is, since new main Lodging facility is not located near this facility.

Administrative Conference Room

Does not exist.

Renovation Recommendation: To be incorporated in new Main Lodging facility.

In House Laundry

Space exists, but is not sized to meet full requirement of post.

Renovation Recommendation: Even though this space is not standard for a secondary facility, recommend leaving as is, since new main Lodging facility is not located near this facility.

- **Public Spaces**

Public Corridors

Existing corridors are only 5' wide in lieu of standard 6' wide corridors.

Renovation Recommendation: It is felt this deficit is not critical to the intent of the standards.

Lobby

Space exists, but will be oversized for secondary facility.

Renovation Recommendation: Leave as is.

Multipurpose Room

Space exists, but is not required as part of a secondary facility.

Renovation Recommendation: Use space as study rooms, which do not exist.

Study Rooms

Does not exist.

Renovation Recommendation: Use multipurpose room as study rooms.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>0.50%</b>	<b>\$11,742.15</b>
Parking: AC Pavement Damaged or Failing		\$11,742.15
<b>04 Masonry</b>	<b>1.33%</b>	<b>\$31,416.00</b>
Brick Wall: Repoint		\$31,416.00
<b>06 Wood &amp; Plastics</b>	<b>4.42%</b>	<b>\$104,729.21</b>
Base Cabinets: Beyond Useful Life		\$46,401.71
Upper cabinets: Beyond expected useful life		\$58,327.50
<b>09 Finishes</b>	<b>26.43%</b>	<b>\$625,867.77</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$23,126.19
Carpet: Beyond Useful Life		\$101,834.32
Drywall Ceilings: Damaged or Failing		\$22,847.84
Floor Tile: Damaged or Failing		\$39,336.54
Interior ceilings: Paint Failing		\$27,918.41
Interior walls: Paint failing		\$25,290.47
Rubber Gym Floor: Beyond Useful Life		\$3,141.67
VCT: Beyond Useful Life		\$9,650.63
Vinyl Wall Covering: Beyond expected useful life		\$312,000.11
Wall Tile: Damaged or Failing		\$60,721.59
<b>10 Specialties</b>	<b>0.36%</b>	<b>\$8,549.89</b>
BR Accessories: Replace due to remodel		\$8,549.89
<b>15 Mechanical</b>	<b>30.12%</b>	<b>\$713,237.74</b>
Kitchen exhaust: Beyond expected useful life		\$58,852.50
Restroom exhaust: Missing or inadequate		\$158,080.15
Sink & vanity: Replace due to remodel		\$85,190.18
Sink, kitchen: Beyond expected useful life		\$127,155.00
Tub: Beyond expected useful life		\$174,713.18
Water closet: Beyond expected useful life		\$109,246.73
<b>16 Electrical</b>	<b>14.68%</b>	<b>\$347,702.44</b>
Fixture: Incandescent fixture beyond expected life		\$295,165.27
Fixtures, fluorescent: Beyond expected useful life		\$52,537.17
<b>19 FF&amp;E</b>	<b>22.17%</b>	<b>\$525,000.00</b>
Hard and soft goods: Beyond expected useful life		\$525,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$2,368,245.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$13,025.35
Force Protection	9.00%	\$235,628.54
General Conditions	10.00%	\$236,824.50
<b>Total Additional Hard Cost</b>		<b>\$485,478.38</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$285,372.34
SIOH Conus	6.50%	\$204,041.22
Design	10.00%	\$285,372.34
08 MYr Inflation Fct	9.93%	\$360,310.97
<b>Total Soft Cost</b>		<b>\$1,135,096.87</b>
<b>Total Project</b>		<b>\$3,988,820.25</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.98%</b>	<b>\$256,688.25</b>
Parking Lots		\$92,568.00
Site Earthwork		\$164,120.25
<b>03 Concrete</b>	<b>19.90%</b>	<b>\$1,714,019.08</b>
Floor Construction		\$1,181,674.33
Slab on Grade		\$121,511.25
Stair Construction		\$46,305.00
Standard Foundations		\$364,528.50
<b>04 Masonry</b>	<b>4.40%</b>	<b>\$378,778.79</b>
Exterior Walls		\$378,778.79
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.92%</b>	<b>\$510,109.06</b>
Roof Construction		\$211,776.39
Roof Coverings		\$298,332.67
<b>08 Doors &amp; Windows</b>	<b>7.50%</b>	<b>\$646,410.45</b>
Exterior Doors		\$18,722.55
Exterior Windows		\$483,000.00
Interior Doors		\$144,687.90
<b>09 Finishes</b>	<b>19.15%</b>	<b>\$1,649,794.49</b>
Ceiling Finishes		\$452,794.62
Floor Finishes		\$525,723.62
Partitions		\$372,864.95
Wall Finishes		\$298,411.30
<b>10 Specialties</b>	<b>0.04%</b>	<b>\$3,558.98</b>
Fittings		\$3,558.98
<b>11 Equipment</b>	<b>2.34%</b>	<b>\$201,636.23</b>
Commercial Equipment		\$15,881.25
Other Equipment		\$185,754.98
<b>13 Special Construction</b>	<b>5.09%</b>	<b>\$438,892.31</b>
Communications & Security		\$197,574.45
Sprinklers		\$241,317.87
<b>14 Conveying Systems</b>	<b>2.62%</b>	<b>\$225,540.00</b>
Elevators and Lifts		\$225,540.00
<b>15 Mechanical</b>	<b>16.62%</b>	<b>\$1,432,050.90</b>
Cooling Generating Systems		\$583,245.60
Domestic Water Dist		\$249,480.00
Plumbing Fixtures		\$599,325.30
<b>16 Electrical</b>	<b>7.34%</b>	<b>\$632,644.95</b>
Electrical Service & Distribution		\$628,035.45
Site Lighting		\$4,609.50
<b>19 FF&amp;E</b>	<b>6.09%</b>	<b>\$525,000.00</b>
Interior FF&E allowance		\$525,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$8,615,123.48</b>

**Additional Hard Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$47,383.18
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$861,512.35
<b>Total Additional Hard Cost</b>		<b>\$908,895.53</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$476,200.95
SIOH Conus	6.50%	\$650,014.30
Design	10.00%	\$952,401.90
08 MYr Inflation Fct	9.93%	\$1,152,141.77
<b>Total Soft Cost</b>		<b>\$3,230,758.92</b>
<b>Total Project Cost for Replacement</b>		<b>\$12,754,777.93</b>

**INSERT BUILDING 7691 FLOOR PLANS HERE  
(EXISTING AND RENOVATION PLANS)**



Front view. Ground torn up due to geothermal lines.

## Building 856

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Building 856 was constructed in 1958. The 12,991 square foot facility contains 16 lodging units: 4 suites with private bedrooms and bathrooms but shared kitchens and 12 suites with private bedrooms, bathrooms, and kitchens. The building is functioning as 15 family suites. One unit has been diverted for housekeeping.

### Significant Assumptions

The replacement and renovation cost models are based on 20 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,348,215.00
Replacement Cost	\$2,635,525.00
Condition Assessment to Replacement Cost Ratio	51.16%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 856 is not recommended.

## Attributes

01.Number of Units Constructed	16
02.Number of Units Used	15
03.Back of House Function	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	4
07.Multi Room w/ Full Kitchen	12
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	15
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	20
16.Delta renovation	4



## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Hard goods consist of a headboard, nightstand, dresser, lamps, desk with chair, entertainment armoire, couch, easy chair, coffee table, and end table. Soft goods consist of mini-blinds, curtains, TV, mattress and box springs and bed coverings. Hard and soft goods are in fair condition.
- Recommendation: Replace all hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beams and poured piers on compacted soil. The center contains a basement section with poured concrete walls. There are minor cracks visible in the basement walls. Foundation is in fair condition.
- Recommendation: Repair the basement wall cracks.

#### **Slab on Grade**

- Analysis: The slab on grade is in fair condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The floor construction is wood frame with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a plywood deck attached to sloped wooden rafters. The roof construction is in good condition. Gutters and downspouts are in poor condition.
- Recommendation: Replace gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: The exterior walls on the first floor are brick veneer, and are in good condition. Exterior walls on the second floor are a combination of wood siding and dryvit/stucco, and are in good condition.
- Recommendation: Refinish wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders, and are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: Vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal, and is in fair condition.
- Recommendation: Replace the laundry area access door.

## **Roofing**

### **Roof Coverings**

- Analysis: The roof is a sloped asphalt shingle roof on a wood deck. Shingles are in fair condition.
- Recommendation: Replace the asphalt shingles.

## **Interior Construction**

### **Partitions**

- Analysis: Interior partitions are drywall on wood studs, and are in good condition.
- Recommendation: No corrective action required.

### **Interior Doors**

- Analysis: Interior entry doors are solid core wood doors in metal frames, and are in good condition. Other doors are solid core or bi-fold wood doors, and are in good condition.
- Recommendation: No corrective action required.

### **Fittings**

- Analysis: Fittings are in fair condition.
- Recommendation: Replace bathroom accessories.

## **Stairs**

### **Stair Construction**

- Analysis: Stairs are wood framed with wood handrails. There are four sets of stairs in the building, and stairs are in good condition.
- Recommendation: No corrective action required.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: Wall finishes are painted drywall, and are in good condition. The bathroom has a ceramic tile wainscot, which is in good condition.
- Recommendation: Install vinyl wall covering and full height ceramic tile in the bathrooms.

### **Floor Finishes**

- Analysis: Floor finishes include carpet, ceramic tile, and vinyl composition tile. The floor finishes are in fair condition.
- Recommendation: Replace the carpet. Replace the vinyl composition tile with ceramic tile.

### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall, and are in fair condition.
- Recommendation: Paint the ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub and shower combination, and a wall mounted lavatory. All fixtures are in fair condition. Plumbing lines are original and are in fair condition.
- Recommendation: Replace the plumbing fixtures, plumbing lines, and bathroom accessories.

### **Domestic Water Distribution**

- Analysis: The building contains an electric boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The mechanical system has been recently replaced with a geo-thermal heat pump system. The existing two-pipe fan-coil hydronic heating and cooling system has been abandoned in place. The heat pump system is in new condition.
- Recommendation: Remove the boiler, chiller, and old fan coil system.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building does not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electric service is through a 120/208Y volt, 400 amp main panel. The electrical service is original and is in fair condition. Lighting uses fluorescent and some incandescent fixtures. Lighting is in fair condition and wiring is original. Outlets in the building are in sufficient quantity and in good condition.
- Recommendation: Replace main service and branch circuits. Replace lighting fixtures.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors. The system has an annunciator panel and is connected to the fire department. The system is in good condition.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: Kitchens include base and wall cabinets, a stove, a sink, a microwave, and full size refrigerator. The kitchen equipment is in good condition.
- Recommendation: No corrective action required.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs. The site is disrupted due to burying for the geo-thermal system, but should be in good condition when completed. The concrete sidewalks in front of the building are in fair condition. They are intact but have settled in several places.
- Recommendation: Replace settled sections of sidewalk.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition.
- Recommendation: Replace the parking lot.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: The site lighting is in poor condition.
- Recommendation: Replace the site lighting.

## **Major Functional Criteria**

- **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.66%</b>	<b>\$45,285.09</b>
Parking: AC Pavement Damaged or Failing		\$43,984.50
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>03 Concrete</b>	<b>0.45%</b>	<b>\$3,640.35</b>
Concrete Walls: Damaged and Cracked		\$3,640.35
<b>06 Wood &amp; Plastics</b>	<b>3.67%</b>	<b>\$29,366.82</b>
Base Cabinets: Beyond Useful Life		\$9,768.78
Upper cabinets: Beyond expected useful life		\$19,598.04
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.73%</b>	<b>\$45,860.64</b>
Asphalt Shingle Roof: Beyond Useful Life		\$39,115.44
Gutters: Damaged or Failing		\$6,745.20
<b>09 Finishes</b>	<b>25.74%</b>	<b>\$206,014.53</b>
Carpet: Beyond Useful Life		\$19,467.77
Exterior Wood Stain Finish: Failing		\$3,669.12
Floor Tile: Damaged or Failing		\$10,687.90
Interior ceilings: Paint Failing		\$6,229.69
Interior walls: Paint failing		\$7,933.31
Vinyl Wall Covering: Beyond expected useful life		\$91,413.69
Wall Tile: Damaged or Failing		\$66,613.05
<b>10 Specialties</b>	<b>0.17%</b>	<b>\$1,384.27</b>
BR Accessories: Replace due to remodel		\$1,384.27
<b>13 Special Construction</b>	<b>6.75%</b>	<b>\$54,042.41</b>
Fire Sprinklers: Missing or Inadequate		\$54,042.41
<b>15 Mechanical</b>	<b>21.60%</b>	<b>\$172,914.64</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$31,489.40
Hydronic heating system: Beyond expt useful life		\$11,362.63
Kitchen exhaust: Beyond expected useful life		\$16,478.70
Sewage System: Beyond expected useful life		\$15,107.13
Sink & vanity: Replace due to remodel		\$13,792.70
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$35,603.40
Tub: Beyond expected useful life		\$26,622.96
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$17,687.57
<b>16 Electrical</b>	<b>20.23%</b>	<b>\$161,953.84</b>
Branch Circuits: Beyond Expected Useful Life		\$42,798.27
Building sevice: Beyond expected useful life		\$3,041.33
Fixture: Incandescent fixture beyond expected life		\$56,608.01
Fixtures, fluorescent: Beyond expected useful life		\$22,887.48
Inadequate exterior Lighting		\$18,333.00
Main service: Beyond expected useful life		\$18,285.75

<b>19 FF&amp;E</b>	<b>9.99%</b>	<b>\$80,000.00</b>
Hard and soft goods: Beyond expected useful life		\$80,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$800,463.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$4,402.55
Force Protection	9.00%	\$79,642.07
General Conditions	10.00%	\$80,046.30
<b>Total Additional Hard Cost</b>		<b>\$164,090.91</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$96,455.39
SIOH Conus	6.50%	\$68,965.60
Design	10.00%	\$96,455.39
08 MYr Inflation Fct	9.93%	\$121,784.53
<b>Total Soft Cost</b>		<b>\$383,660.92</b>
<b>Total Project</b>		<b>\$1,348,214.83</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.87%</b>	<b>\$68,941.29</b>
Parking Lots		\$17,556.00
Site Earthwork		\$51,385.29
<b>03 Concrete</b>	<b>16.42%</b>	<b>\$292,298.40</b>
Floor Construction		\$170,571.90
Slab on Grade		\$38,004.75
Stair Construction		\$7,717.50
Standard Foundations		\$76,004.25
<b>04 Masonry</b>	<b>6.07%</b>	<b>\$108,079.38</b>
Exterior Walls		\$108,079.38
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.73%</b>	<b>\$137,638.84</b>
Roof Construction		\$43,810.52
Roof Coverings		\$93,828.33
<b>08 Doors &amp; Windows</b>	<b>8.02%</b>	<b>\$142,849.35</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$100,800.00
Interior Doors		\$31,733.10
<b>09 Finishes</b>	<b>14.53%</b>	<b>\$258,660.86</b>
Ceiling Finishes		\$41,810.08
Floor Finishes		\$73,437.44
Partitions		\$76,486.76
Wall Finishes		\$66,926.58
<b>10 Specialties</b>	<b>0.09%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>4.13%</b>	<b>\$73,500.00</b>
Other Equipment		\$73,500.00
<b>13 Special Construction</b>	<b>5.14%</b>	<b>\$91,509.12</b>
Communications & Security		\$41,194.30
Sprinklers		\$50,314.81
<b>15 Mechanical</b>	<b>20.75%</b>	<b>\$369,406.80</b>
Cooling Generating Systems		\$121,606.80
Domestic Water Dist		\$56,700.00
Plumbing Fixtures		\$191,100.00
<b>16 Electrical</b>	<b>7.62%</b>	<b>\$135,680.48</b>
Electrical Service & Distribution		\$133,375.73
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.62%</b>	<b>\$100,000.00</b>
Interior FF&E allowance		\$100,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$1,780,147.92</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,790.81
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$178,014.79
<b>Total Additional Hard Cost</b>		<b>\$187,805.61</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$98,397.68
SIOH Conus	6.50%	\$134,312.83
Design	10.00%	\$196,795.35
08 MYr Inflation Fct	9.93%	\$238,067.72
<b>Total Soft Cost</b>		<b>\$667,573.57</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,635,527.09</b>



**INSERT BUILDING 856 FLOOR PLANS HERE**



## Building 857

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Building 857 was constructed in 1958. The 12,991 square foot facility contains 14 lodging units, each is a multi-bedroom suite with a private kitchen. The building is functioning as 14 family suites.

### Significant Assumptions

The replacement and renovation cost models are based on 16 family suites.

The renovation plan, if required, would use the existing foot print with the plan reworked to meet current lodging size requirements.

The replacement cost model includes any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix

All costs are adjusted by the Area Cost Factor of 105% for Fort Knox, Kentucky.

### Cost Analysis

Condition Assessment Cost	\$1,215,140.00
Replacement Cost	\$2,189,560.00
Condition Assessment to Replacement Cost Ratio	55.50%

Because the Condition Assessment to Replacement Cost Ratio is greater than 50%, renovation of Building 857 is not recommended.

## Attributes

01.Number of Units Constructed	14
02.Number of Units Used	14
03.Back of House Function	Yes
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	14
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	14
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	16
16.Delta renovation	2

## **Condition Analysis/Recommendation**

### **FF&E**

#### **FF&E Allowance**

- Analysis: Hard goods consist of a headboard, nightstand, dresser, lamps, and desk with chair, entertainment armoire, couch, easy chair, coffee table, and end table. Soft goods consist of mini-blinds, curtains, TV, mattress and box springs and bed coverings. Hard and soft goods are in fair condition.
- Recommendation: Replace all hard and soft goods.

### **Foundations**

#### **Standard Foundations**

- Analysis: The foundation is composed of perimeter beam and poured piers on compacted soil. The center contains a basement section with poured concrete walls. There are minor cracks visible in the basement walls. Foundation is in fair condition.
- Recommendation: Repair the basement wall cracks.

#### **Slab on Grade**

- Analysis: The wood framed sub floor and concrete piers are performing as intended. The substructure is in good condition.
- Recommendation: No corrective action required.

### **Superstructure**

#### **Floor Construction**

- Analysis: The floor structure is wood frame with wood decking for the first and second floors. The superstructure is in good condition.
- Recommendation: No corrective action required.

#### **Roof Construction**

- Analysis: The roof consists of a plywood deck attached to sloped wooden rafters. The roof construction is in good condition. The gutters and downspouts are in poor condition.
- Recommendation: Replace gutters and downspouts.

### **Exterior Enclosure**

#### **Exterior Walls**

- Analysis: Exterior walls on the first floor are a brick veneer in good condition. The exterior walls on the second floor are a combination of wood siding and dryvit/stucco. The stucco is in good condition, but the wood siding is in fair condition.
- Recommendation: Seal and stain the wood siding.

#### **Exterior Windows**

- Analysis: The windows are aluminum, double-glazed sliders, and are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: Vestibule entry doors are aluminum and glass and are in good condition. The laundry access door is metal. It is in fair condition.
- Recommendation: Replace the laundry access door.

## **Roofing**

### **Roof Coverings**

- Analysis: The roof is a sloped asphalt shingle roof on a wood deck. Gutters are exterior to the roof with the downspouts exposed. Shingles are in fair condition.
- Recommendation: Replace asphalt shingle roof.

## **Interior Construction**

### **Partitions**

- Analysis: Interior partitions are drywall on wood studs, and are in good condition.
- Recommendation: No corrective action required.

### **Interior Doors**

- Analysis: Interior entry doors are solid core wood doors in metal frames, and are in good condition. Other doors are solid core or bi-fold wood doors, and are in good condition.
- Recommendation: No corrective action required.

### **Fittings**

- Analysis: Fittings and accessories are in fair condition.
- Recommendation: Replace bathroom accessories.

## **Stairs**

### **Stair Construction**

- Analysis: Stairs are wood framed with wood handrails. There are four sets of stairs in the building, and they are in good condition.
- Recommendation: No corrective action required.

## **Interior Finishes**

### **Wall Finishes**

- Analysis: Wall finishes are painted drywall, and are in good condition. Bathrooms have ceramic tile wainscot, which is in good condition.
- Recommendation: Install vinyl wall covering, and add full height ceramic tile in the bathrooms.

### **Floor Finishes**

- Analysis: Floor finishes include carpet, ceramic tile, and vinyl composition tile. The floor finishes are in good condition.
- Recommendation: Replace the carpet. RegROUT the ceramic tile floors and replace vinyl composition tile with ceramic tile.

### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall, and are in fair condition.
- Recommendation: Repaint ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: Each unit has an individual bathroom containing a water closet, a tub and shower combination, and a wall mounted lavatory. All fixtures are in fair condition. Plumbing lines are original and are in fair condition.
- Recommendation: Replace the fixtures and plumbing lines.

### **Domestic Water Distribution**

- Analysis: The building contains an electric boiler with an accompanying hot water tank. The boiler system is in fair condition. The piping is original and is in fair condition.
- Recommendation: Replace the water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system has been recently replaced with a geo-thermal heat pump system. The existing two-pipe fan-coil hydronic heating and cooling system has been abandoned in place. The heat pump system is in new condition.
- Recommendation: Remove the boiler, chiller, and old fan coil system.

## **Fire Protection**

### **Sprinklers**

- Analysis: This building does not contain a sprinkler system.
- Recommendation: Install new sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: Electrical service is through a 120/208Y volt, 400 amp main panel. The electrical service is original and is in fair condition. Lighting uses fluorescent and some incandescent fixtures. Lighting is in fair condition and wiring is original. Outlets in the building are sufficient and in good condition.
- Recommendation: Replace main service, branch circuits and lighting.

### **Communications and Security**

- Analysis: The fire alarm system consists of hard-wired smoke and heat combination detectors located throughout the units. The system has an annunciator panel and is connected to the fire department. The system is in good condition.
- Recommendation: No corrective action required.

## **Equipment**

### **Other Equipment**

- Analysis: Kitchens include base and wall cabinets, a stove, a sink, a microwave, and full size refrigerator. The kitchen furnishings are in good condition.
- Recommendation: No corrective action required.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of grass covered yard areas, trees, and shrubs. The site is disrupted due to burying for the geo-thermal system, but should be in good condition when completed. The concrete sidewalks in front of the building are in fair condition.
- Recommendation: Replace settled sections of sidewalk.

## **Site Improvements**

### **Parking Lots**

- Analysis: The asphalt parking lots are in poor condition.
- Recommendation: Replace parking lot.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: Site lighting is in good condition.
- Recommendation: No corrective action required.

## **Major Functional Criteria**

### **Major Functional Criteria Analysis**

The following are existing conditions that do not meet the Functional Criteria and are considered major deficits. Listed are the recommendations or solutions for remedying each deficit.

- **Back-of-House Spaces**

Most of the back-of-the-house spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

- **Family Guest Suite**

Room Size and Configuration: The rooms do not meet size and configuration requirements.

Recommendation: No action required to renovate structure since the Condition Assessment cost is greater than 50% of the replacement cost.

- **Public Spaces**

Most of the public spaces are required at the main lodging building on post. Presently these are located in Building 7961, and are not included in this building.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>6.31%</b>	<b>\$45,493.83</b>
Parking: AC Pavement Damaged or Failing		\$44,193.24
Walks: Concrete Walk Damaged or Failing		\$1,300.59
<b>03 Concrete</b>	<b>0.50%</b>	<b>\$3,640.35</b>
Concrete Walls: Damaged and Cracked		\$3,640.35
<b>06 Wood &amp; Plastics</b>	<b>5.43%</b>	<b>\$39,165.84</b>
Base Cabinets: Beyond Useful Life		\$9,768.78
Upper cabinets: Beyond expected useful life		\$29,397.06
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.36%</b>	<b>\$45,891.30</b>
Asphalt Shingle Roof: Beyond Useful Life		\$39,115.44
Gutters: Damaged or Failing		\$6,775.86
<b>09 Finishes</b>	<b>20.48%</b>	<b>\$147,772.22</b>
Carpet: Beyond Useful Life		\$19,852.56
Exterior Wood Stain Finish: Failing		\$3,714.98
Floor Tile: Damaged or Failing		\$11,783.78
Interior ceilings: Paint Failing		\$6,218.55
Interior walls: Paint failing		\$6,924.15
Vinyl Wall Covering: Beyond expected useful life		\$57,580.77
Wall Tile: Damaged or Failing		\$41,697.43
<b>10 Specialties</b>	<b>0.17%</b>	<b>\$1,221.42</b>
BR Accessories: Replace due to remodel		\$1,221.42
<b>13 Special Construction</b>	<b>7.21%</b>	<b>\$51,981.30</b>
Fire Sprinklers: Missing or Inadequate		\$51,981.30
<b>15 Mechanical</b>	<b>22.69%</b>	<b>\$163,690.24</b>
Boiler: Beyond expected useful life		\$574.35
Domestic water system: Beyond expected useful life		\$30,296.02
Hydronic heating system: Beyond expt useful life		\$10,933.13
Kitchen exhaust: Beyond expected useful life		\$16,478.70
Sewage System: Beyond expected useful life		\$14,537.04
Sink & vanity: Replace due to remodel		\$12,170.03
Sink, janitorial: Beyond expected useful life		\$2,165.10
Sink, kitchen: Beyond expected useful life		\$35,603.40
Tub: Beyond expected useful life		\$23,295.09
Water Chiller: Abandoned in place		\$2,030.70
Water closet: Beyond expected useful life		\$15,606.68
<b>16 Electrical</b>	<b>21.15%</b>	<b>\$152,596.68</b>
Branch Circuits: Beyond Expected Useful Life		\$41,182.00
Building sevice: Beyond expected useful life		\$40.55
Fixture: Incandescent fixture beyond expected life		\$54,468.75
Fixtures, fluorescent: Beyond expected useful life		\$20,286.63
Inadequate exterior Lighting		\$18,333.00
Main service: Beyond expected useful life		\$18,285.75

<b>19 FF&amp;E</b>	<b>9.70%</b>	<b>\$70,000.00</b>
Hard and soft goods: Beyond expected useful life		\$70,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$721,453.00</b>

**Additional Hard Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Spirit	0.50%	\$3,967.99
Force Protection	9.00%	\$71,780.97
General Conditions	10.00%	\$72,145.30
<b>Total Additional Hard Cost</b>		<b>\$147,894.26</b>

**Soft Cost (Template: Army Lodging Renovation)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	10.00%	\$86,934.73
SIOH Conus	6.50%	\$62,158.33
Design	10.00%	\$86,934.73
08 MYr Inflation Fct	9.93%	\$109,763.74
<b>Total Soft Cost</b>		<b>\$345,791.52</b>
<b>Total Project</b>		<b>\$1,215,138.78</b>



## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.80%</b>	<b>\$56,135.10</b>
Parking Lots		\$14,364.00
Site Earthwork		\$41,771.10
<b>03 Concrete</b>	<b>16.16%</b>	<b>\$238,955.60</b>
Floor Construction		\$138,596.60
Slab on Grade		\$30,880.50
Stair Construction		\$7,717.50
Standard Foundations		\$61,761.00
<b>04 Masonry</b>	<b>6.30%</b>	<b>\$93,114.54</b>
Exterior Walls		\$93,114.54
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.57%</b>	<b>\$111,966.03</b>
Roof Construction		\$35,576.30
Roof Coverings		\$76,389.73
<b>08 Doors &amp; Windows</b>	<b>8.17%</b>	<b>\$120,832.95</b>
Exterior Doors		\$10,316.25
Exterior Windows		\$84,000.00
Interior Doors		\$26,516.70
<b>09 Finishes</b>	<b>14.11%</b>	<b>\$208,715.50</b>
Ceiling Finishes		\$33,620.14
Floor Finishes		\$59,171.62
Partitions		\$62,065.38
Wall Finishes		\$53,858.36
<b>10 Specialties</b>	<b>0.11%</b>	<b>\$1,583.40</b>
Fittings		\$1,583.40
<b>11 Equipment</b>	<b>3.98%</b>	<b>\$58,800.00</b>
Other Equipment		\$58,800.00
<b>13 Special Construction</b>	<b>5.03%</b>	<b>\$74,360.24</b>
Communications & Security		\$33,474.46
Sprinklers		\$40,885.78
<b>15 Mechanical</b>	<b>21.84%</b>	<b>\$322,992.60</b>
Cooling Generating Systems		\$98,817.60
Domestic Water Dist		\$45,360.00
Plumbing Fixtures		\$178,815.00
<b>16 Electrical</b>	<b>7.54%</b>	<b>\$111,466.95</b>
Electrical Service & Distribution		\$109,162.20
Site Lighting		\$2,304.75
<b>19 FF&amp;E</b>	<b>5.41%</b>	<b>\$80,000.00</b>
Interior FF&E allowance		\$80,000.00
Total Raw Cost	100.00%	\$1,478,922.91

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$8,134.08
Force Protection	0.00%	\$0.00

General Cond	10.00%	\$147,892.29
<b>Total Additional Hard Cost</b>		<b>\$156,026.37</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$81,747.46
SIOH Conus	6.50%	\$111,585.29
Design	10.00%	\$163,494.93
08 MYr Inflation Fct	9.93%	\$197,783.45
<b>Total Soft Cost</b>		<b>\$554,611.13</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,189,560.41</b>

**INSERT BUILDING 857 FLOOR PLANS HERE**

# Army Lodging Wellness Recommendation

## Appendix

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
<b>Public Areas</b>											
Exterior Entrance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Vestibule	100	100	150	150	200	200	200	200	200		In Main Lodging facilities square footage included in Lobby
Lobby (includes vestibule at Main Lodging facilities)	300-500	300-500	500-800	500-800	800-1000	800-1000	1,000-1,200	1,000-1,200	1,200-1,500	X	Includes square footage of vestibule at Main Lodging facilities
Front Desk	2 station / 100 s.f.	2 station / 100 s.f.	2 station / 100 s.f.	3 station / 150 s.f.	3 station / 150 s.f.	3 station / 250 s.f.	3 station / 250 s.f.	4 station / 300 s.f.	4 station / 300 s.f.	X	
Bell Cart Station	2 carts / 24 s.f.	2 carts / 24 s.f.	3 carts / 36 s.f.	3 carts / 36 s.f.	4 carts / 48 s.f.	4 carts / 48 s.f.	6 carts / 72 s.f.	6 carts / 72 s.f.	8 carts / 96 s.f.		Not required at facilities w/out interior corridors if building is retained.
Breakfast Bar (Seat/Svc)	550	550	550	550	550	550	550	750	1,000	X	Needed at secondary facility, if it is a remote location. CFSC requirement min 550
Passenger Elevators			1 @ 64 s.f. 50-99 rooms 2 @ 64 s.f. 100-149 rooms	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. 400-499 rooms 3 @ 64 s.f. 500-599 rooms	3 @ 64 s.f. each		If building is over two stories high
Stairs	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each		
Public Corridors	**	**	**	**	**	**	**	**	**		Minimum 6' wide
Public Telephone Area	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	3 phones / 18 s.f.	3 phones / 18 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.		House phone in secondary buildings. Pay phones & house phones at Main facility
Vending - Full Service	1 per building / 70 s.f.	1 per building / 70 s.f.	70	70	70-105	105-140	140-210	210-280	280+		1 for every other floor to support up to 200 units / 70 s.f. each
Vending - Ice Only	1 per building / 30 s.f.	1 per building / 30 s.f.	30	30	30-45	45-60	60-90	90-120	120+		1 for every other floor to support up to 200 units / 30 s.f. each
Women - Lobby	100	100	200	200	260	260	315	315	350	X	
Men - Lobby	100	100	200	200	260	260	315	315	350	X	
Multi-Purpose Rm	250	250	250	250	250	250	250	250	250	X	
Study Rooms	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 per 25 extended stay units of 250 s.f. each at posts with schools facilities
Guest Laundries	192	192	192-384	384-576	576-768	768-1152	1152-1536	1536-2112	2112+		CFSC requirement 2w/d for every 75 guest rooms
Gear Wash Rooms	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each		Only at facilities with outdoor training
Guest Bulk Storage	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 unit for every 4 family suites of 25 ea. 40 w/circ.
<b>Guest Rooms</b>											
Guest Room - Standard	300	300	300	300	300	300	300	300			
Guest Room - Ext. Stay	300	300	300	300	300	300	300	300			
Guest Room - Suites	450	450	450	450	450	450	450	450			

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
<b>Back-of-House Areas</b>											
Manager's Office	180	180	180	180	180	180	180	180	180	X	
Assist. Mgr. Off.	-	-	0 50-99 units 120 100-149 units	120	120	120	120	120	120	X	
Front Office Mgr.	100	100	100	100	100	100	100	100	100	X	
Admin. Offices	2 space / 200-250 s.f.	2 space / 200-250 s.f.	2 spaces / 200-250 s.f.	2 spaces / 200-250 s.f.	5 spaces / 500-600 s.f.	5 spaces / 500-600 s.f.	7 spaces / 800-900 s.f.	7 spaces / 800-900 s.f.	10 spaces / 1,100-1,200 s.f.	X	
Cash Room	50	50	75	75	100	100	125	125	150	X	
Luggage Storage	-	-	75	75	100	100	100	100	100	X	
Admin. Conf. Rm.	250	250	250	250	350	350	350	350	350	X	
Housekeeping Off.	120	120	120	120	120	120	120	120	120	X	
Dirty/Clean Linen Stor.	50	50	50	50	100	100	200	200	400	See Note	At all facilities w/out in-house laundry
In-House Laundry	500	500	500	500	500	500	750	750	900	X	CFSC requirement min 500 s.f.
Receiving Office	75	75	75	75	75	75	75	75	75	X	
Maintenance Area	100	100	175	175	250	250	400	400	600	X	
Kitchen Prep Room	150	150	150	150	150	150	150	150	150	X	facility, if it is a remote location.
Break Room		140	210	210	280	280	350	350	420		
Staff Toilet - Men			200	100	100	100	150	150	200		
Staff Toilet - Women		100	100	100	150	150	200	200	250		
Access Corridor	**	**	**	**	**	**	**	**	**		
Receiving	150	150	150	150	150	150	150	150	200	X	
Housekeep. Rms.	128	128-512	512-1280	1280-1792	1792-2560	2560-3456	3456-5120	5120-6912	6912+		128 s.f. for each 15 guest rooms
Service Elevator	80	80	80	80	80	80	80	80	80		
Data/Commo Rm.	100	100	100	100	150	150	150	150	150		
Switch Closets	16 *	16 *	16-48 *	48-64 *	64-96 *	96-128 *	128-144 *	144-256 *	256+ *		1 closet of 16 s.f. for approximately 50 guest rooms
Janitor Closet	50	50	50	50	50	50	50	50	50	X	Only at first floor of Main Lodging facility.
Mechanical Room	*	*	*	*	*	*	*	*	*		
General Stor. Rm.	500	500	500	500	500	500	500	500	500	X	
Bulk Storage Rm.	500	500	500	500	500	500	500	500	500	X	
Electrical Room	140 *	140 *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *		One electrical room to serve no more than 100 rooms.
Elevator Equip.Rm.	84	84	84	84	84	84	84	84	84		
<b>EXTERIOR</b>											
Playground (Outdoor)										X	Play ground required at facilities with family stays.
Grounds Maintenance	400	400	400	400	400	400	400	400	400	X	

\* Mechanical/electrical/equipment Spaces to be determined by contractor based on appropriate code and recommended systems.

\*\* Corridors to be determined based on building layout.